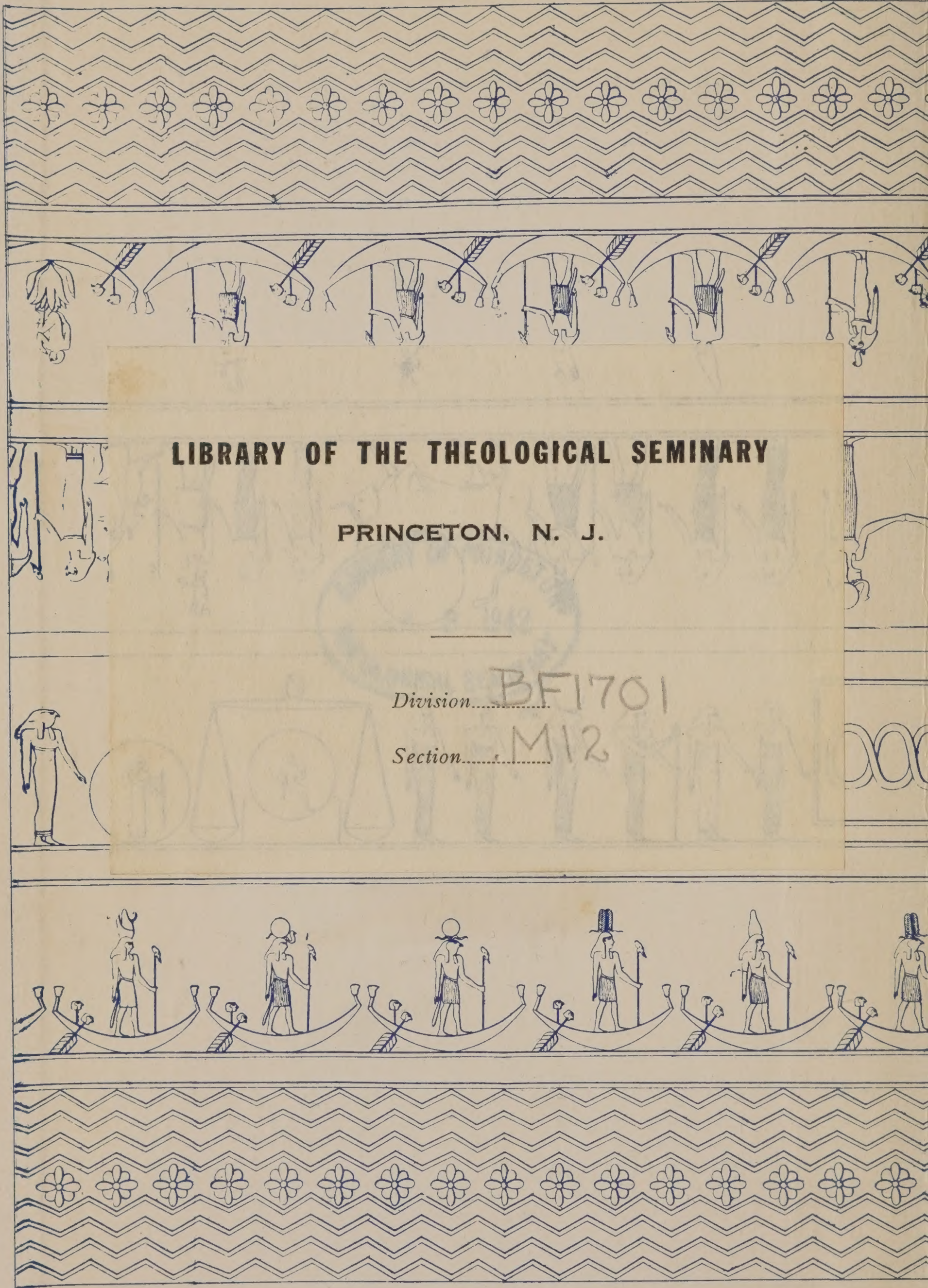
ASTROLOGY

Its History and Influence in the Western World

ELLEN McCAFFERY



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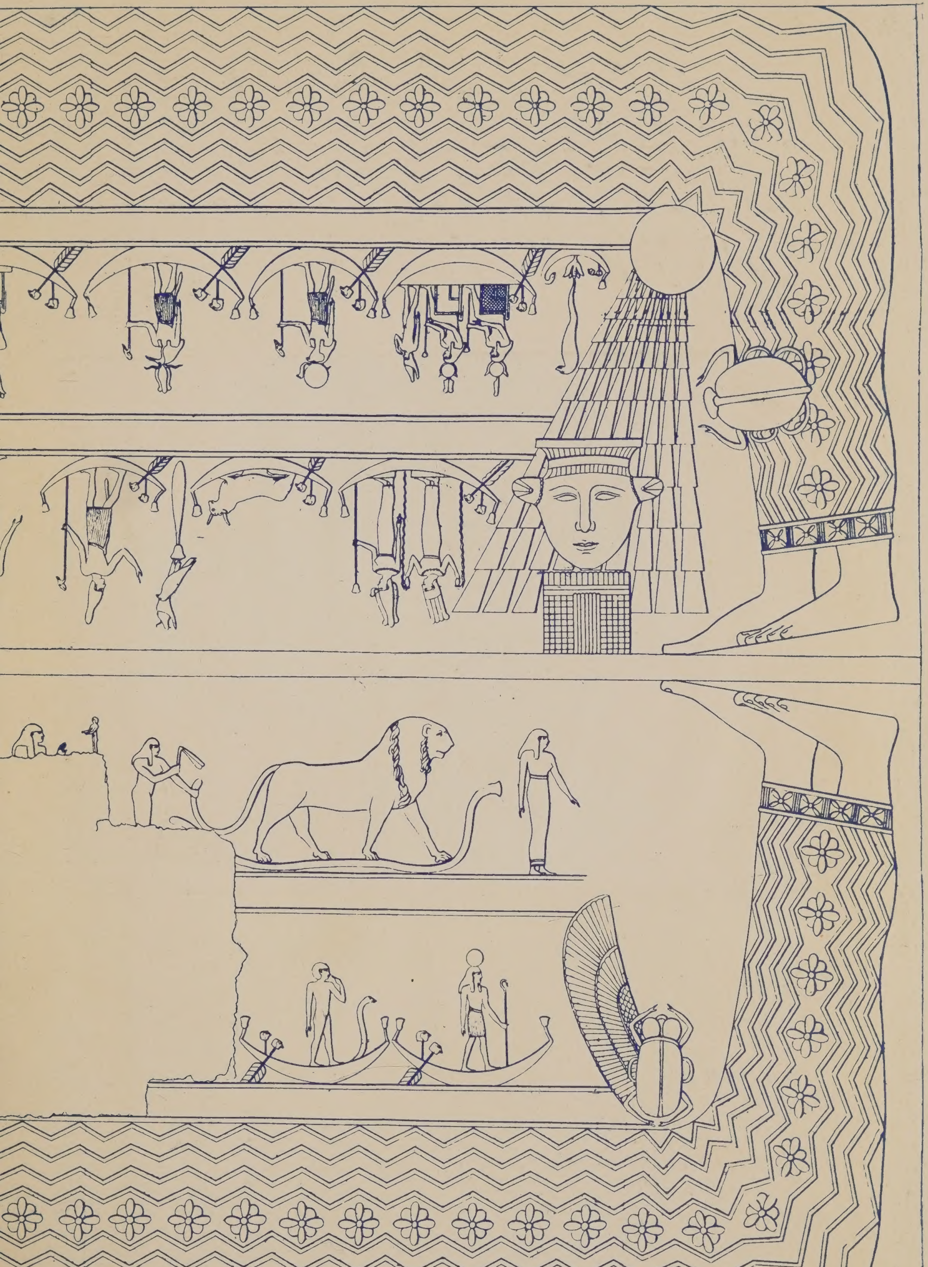
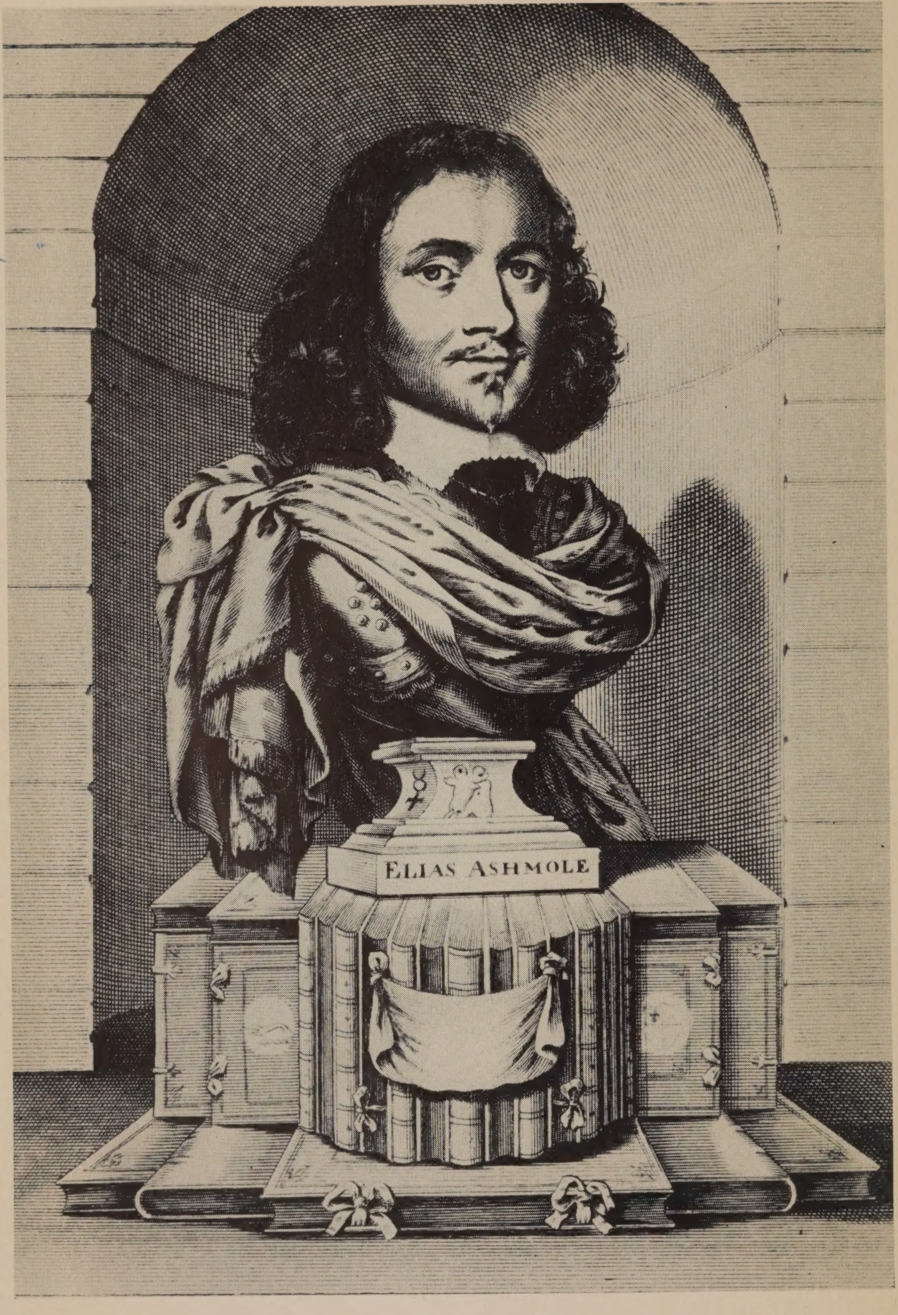


ASTROLOGY

ITS HISTORY AND INFLUENCE IN THE WESTERN WORLD



ELIAS ASHMOLE

Note the symbol of Mercury, and the sign of the Bull, for Taurus, at the base of the bust. He had Gemini rising ruled by Mercury, and Sun in Taurus ruled by Venus.

ASTROLOGY

Its History and Influence in the Western World

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By

ELLEN McCAFFERY, M.A.

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A

Dedicated

to

my astrological friends and students
throughout the world

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Cassell, Petter and Galpin—*First Sketch of English Literature,* by Henry Morley.

Bohn's Library—*Specimens of Early English Literature,* ed. by Geo. Ellis (1848); Lilly's *Astrology,* ed. Zadkiel.

Librairie Félix Alcan, Paris—*St. Thomas d'Aquin et l'Influence des Astres,* by Paul Choisnard.

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Frederick Warne & Co.—Dryden's *Poetical Works;* Johnson's *Lives of the Poets.*

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University of Michigan—*Royal Correspondence of the Assyrian Empire,* by Leroy Waterman.

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Funk and Wagnalls—*Perfect Calendar,* by Henry Fitch.
Wm. H. Wise—*Lives of the Roman Empresses,* by Jacques de Serviez.
Victoria Institute—*Religion of Zoroaster,* by R. Brown (1879).
Encyclopaedia Britannica.
Everyman's Encyclopaedia.
Jewish Encyclopaedia.

Preface

The present book is the result of research extending over many years. As I came across various matters connected with astrological history I made notes, until in time there was a very heterogeneous collection of names and of odd facts. I found my greatest initial task was to find out when all these people lived, who they were and what they did. Astrologers throughout the ages have made such lists of people but have failed to record their period. However, in finding out facts about one, I would often come upon facts relating to others, until in time I had a survey that ran through the centuries. At first I thought there would be many hiatuses, but as I went on I found there were none. There has always been an astrological interest, which has never died out. How it has been manifested has been different at different times. In one century it would be predictions that arrested the attention, in another century it would be the scientific phase and in another the philosophical content.

I am quite aware that more research is needed on astrological history than I have given the matter. I have merely tried to present a broad outline of the centuries in simple non-technical phraseology. Each separate chapter could be a book in itself. Perhaps someone will undertake the task. Also, each separate country has had its own astrological history. I was aware of this when I attended the Paris Convention of the European Federation of Scientific Astrologers in 1937, when the Polish delegate presented the result of three years' research by his group on the ancient astrological history of Cracow University. It was in listening to this paper that I learned of the great interest in astrology shown by Copernicus and his friends.

I have checked all the facts and statements I have collected against source books whenever possible. For the ancient Egyptian and Babylonian periods I went to the best books on these early ages. For the Greek and Roman authors I found Smith's *Diction-*

ary of Greek and Roman Biography gave me the best checks. In dealing with the Arabs, Moors and early mediaeval astrologers *The Legacy of Islam* and *The Legacy of Israel* were most helpful. So also were my high-school textbooks, Craik's *Manual of English Literature* and Morley's *First Sketch of English Literature*. They gave me clues which were invaluable. The notes at the end of Scott's Poetical Works enabled me to see clearly into the maze of legend surrounding Michael Scot. Ashmole's *Theatrum Chemicum* gave me data on Dr. Dee and other alchemists. For the chapter on Stuart times I got major help from the *Dictionary of National Biography*. As regards the titles of books, I have checked them against the *British Museum Catalogue*.

If I take exception to one statement of Otto Wedel concerning Chaucer, contained in his book *The Mediaeval Attitude Towards Astrology,* it is not that I do not think this work a very valuable contribution towards astrological research. I really hope that he will expound some of the other centuries in this way, but that he will spend a few years first learning astrology itself. It is a very moot question whether anyone should write about any subject until he has studied it.

I have not tried to force any conclusion, but merely stated the facts as I see them. As a rule, I have listed reference and source books in footnotes in the order of their occurrence.

With regard to the names of people of ancient days, I have spelled them in the manner commonly accepted by English historians, e.g., *Albumazar* and not *Abū-Ma'sh-ar,* which is recognized by modern researchers as more correct, but which completely baffles the average reader because such a rendition is entirely unknown in the older reference books. I have experienced so much difficulty myself, as to whether various and manifold names belonged to one and the same person, that I have given name-variations, either in the text or in footnotes.

During the Middle Ages almost every author Latinized his name, e.g., Marsilio Ficino wrote under the name of Marsilius Ficinus. I have not used Latinized names unless they occur in the authors I quote, or unless the Latinized names have established themselves, as in the case of Albertus Magnus, etc.

Where dates of persons' lives are not known with exactitude, I have inserted the abbreviation "c." for "circa" (about).

ELLEN McCAFFERY.

New York,
1942.

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ASTROLOGY

ITS HISTORY AND INFLUENCE IN THE WESTERN WORLD

In a perfectly determinate scheme the past and future may be regarded as lying mapped out—as much available to present exploration as the distant parts of space. Events do not happen; they are just there, and we come across them. "The formality of taking place" is merely the indication that the voyager has on his voyage of exploration passed into the absolute future of the event in question. . . .

So, if events are determinate, there is nothing to prevent a person from being *aware* of an event before it happens; and an event may cause other events previous to it.

Sir Arthur Eddington—*Space, Time, and Gravitation.*

If once we grasp the idea that the past and the future may be actually existing, we can recognize that they may have a controlling influence on all present action, and that the two together may constitute the higher plane or totality of things. . . .

Sir Oliver Lodge—from his *Address to the Mathematical Section of the British Association,* at Cardiff, Wales.

INTRODUCTORY CHAPTER

Part I. *Introducing the Subject of Astrology*
Part II. *Introducing the History of Astrology*

I

People want to know *Why* long before they want to know *How.* Even the smallest child can spend his day continually starting with the word Why. The questions of children are so often unanswerable that in time they come to the conclusion that no one knows anything about the things that matter. As they grow to be adults they consider it wise to hug their Whys to themselves until they find an astrologer, then the pent up questionnaire of the years bursts forth:

Why am I unhappy?
Why am I not successful?
Why do I have to suffer?
Why is everyone so mean to me?
Why don't I marry?

All these are large questions, which are not answered in a moment unless one counters with other questions, such as:

What would make you happy?
What have you done to make yourself successful?

Curiously enough when faced with the question, "What would make you happy?", hardly anyone knows. Some think money, some think marriage, some think children, some think a position. Some want the dead raised to life, and some want the living to live forever. Others think they are being more reasonable in merely wanting to do *what* they want *when* they want. An astrologer needs a large philosophy of life to deal with all types of people. The more concrete the question, the easier it is to answer. Is it a question of money? The horoscope can show the source of the money,—whether earned or whether a gift or legacy. It can show also the type of work which will bring money.

Does the question concern marriage? The horoscope can show the most probable year of marriage, but if no marriage at all is shown, philosophy must enter quickly, for immediately the question comes, "Why can't I have what I want in life?"

This is where some concept of a pattern in life must grow in the mind of the client. I think it is the desire to know whether there really is a pattern, and what their particular pattern is, that makes most people decide to learn astrology and find out for themselves whether the astrologer is right or wrong.

Astrology is not a simple subject. It may look so on the surface, but it is not. Most people start just as musicians start to learn the piano,—just know the various notes on the piano, and hit them. How perfectly simple. People may say it takes years to be a good pianist, but the young musician smiles. He knows better. It may take some people a long time, but what is there to prevent him learning in a few weeks? He is different from other people. After a few weeks or a few months he may drop out, but if he is a real musician the lure of music carries him along, until after a few years, he knows that he is doing very well, but even when he is "free of his keyboard" as the saying is, he realizes that "art is long and time is short."

So with the young astrologer. He finds there is nothing to a chart except planets, signs and houses. These he will master in a few days,—so he thinks. He can soon set up a chart. The mathematical part is not difficult. Then when he looks at each new chart, he wonders what it all means. Will he ever be able to see his way through it? Everything looks so contradictory. Learning to read horoscopes is a slow, tantalizing task. The beginner is in the same position as a young medical student who knows every bone and nerve and muscle in the body, and yet who has no ability to diagnose a case. But gradually one factor after another starts to dawn in the consciousness. The astrological student learns by experience that a Sun-Saturn type acts quite differently from a Sun-Jupiter type. He learns that one Gemini person he has met acts differently from another, and he discovers that one has Mercury, the ruler of Gemini in perchance Cancer and the other has it in Virgo,—and the difference is comprehended.

An understanding gradually establishes itself in the student's mind that people are what they are, and a greater sense of tolerance grows up. Then, as the process of progressions, or the timing of events, is comprehended, students bring me very illuminating statements: "Oh, now I understand why I didn't marry such and such a person. He was a Uranian and hated to be bossed, and I spent all my time trying to boss him,—and when Uranus came opposition my . . ., he walked out on me. Of course he would, under that aspect. Well, if I'd known astrology then, I'd . . ." or, "I've just discovered why I got fired in that last job. My employer was a Virgoan, and he loved to have every detail given to him in writing,—and I hated to write up all that unnecessary detail, so when Mars squared my . . ., he got mad enough to put me out. If I'd known astrology then, I'd . . ."

When I hear statements like this, I realize my students are growing. Another stage comes when they want to know how to handle coming aspects:

"I have Saturn bearing down on my Mercury, does that mean that everybody will give me the cold shoulder?" To which I reply: "With this beautiful aspect coming, you will now have all the time in the world, without interruption, to study, write and think out all the matters you have planned to do for years. So make up your mind what you are going to tackle,—what your objective is,—and when the aspect is over, you can come and tell me what you have accomplished." And later they do come and tell me.

I think the study of astrology makes for friendships that are as close as, or even closer than, many family ties. They are friendships founded on mutual understanding. They are as a rule most impersonal and have nothing to do with social life, families, race or money. One can note one astrologer talking to another. They may have met less than five minutes before and they've already forgotten that the rest of the world exists until they have thrashed out some knotty problem. Just happy in the exchange of fascinating ideas. Neither trying to impress the other, knowing that the world of astrology is the world of absolute truth.

If one asks why, with vast numbers of people studying astrology through the ages, there have not been millions of great astrologers, I merely ask why it is that, with all the children learning, free of charge, music and mathematics during the last half century, everyone is not by now a great musician or a great mathematician? I think to pursue a subject after school days shows the fundamental love of a subject. It is a case of many are called but few are chosen. Only people who love astrology and have particular gifts make good astrologers,—and for the love of it they have learned mathematics, geometry (plane and spherical), astronomy, philosophy and even foreign languages. They have walked the highways of the world and they have sailed the seven seas in search of truth. They have put up with insults and with ostracism. They have been branded with every ugly name, and some have been jailed, while others have even been put to death. Yet they all have been as sure that astrology works as Galileo was that the earth moved.

What is the basis of astrology? It is based on a similarity that exists between the face of the heavens and the things on the earth. It is based on a Time factor, and it is a revelation of the potentialities held within Time.

A horoscope is variously called a chart, a wheel, or a nativity.

A horoscope, or wheel with 12 spokes, is a representation of two things:

(1) The heavens.

(2) The earth.

It is merely a picture of how the heavens look, or are pictured, upon the earth, at birth,—or at any given moment, for a horoscope can be drawn of anything, animals, events, the signing of contracts or the asking of questions.

The following are the major divisions of astrology:

Genethliacal or Judicial Astrology is the astrology of the lives of people.

Natural Astrology relates to weather, earthquakes, etc.

Mundane Astrology relates to the affairs of nations.

Horary Astrology relates to the answering of questions, not from the birth chart, but from the moment when the question is propounded.

Elective Astrology is the setting of a suitable time for starting a project.

A horoscope has:

(1) 12 houses, or compartments, each designated to some particular phase of human life, e.g., money, love, work, etc. (see Diagrams 18 and 19 in Appendix I.)

(2) 12 signs of the zodiac, each representing some quality or phase of mental or emotional experience. These signs are superimposed on the houses.

(3) 10 planets, each representing some motivating power, e.g., Mars represents centrifugal energy, while Venus represents drawing power or attraction.

A planet may be in any 12 of the signs, but it will always maintain its own energy or motivation; however, the result as seen by the world will be as different as the light coming from the same electric incandescence placed in different colored bulbs. Therefore the student has to know the apparent effect of each of the 10 planets in each of the 12 signs, that is, he has to know:

10 × 12 or 120 modes of the expression of activity.

After this is comprehended he has to know in what house (or houses) the signs fall, in order to know what influence is playing on a specific department of life. Is it playing on the house of work, or on the house of travel? This will necessitate an understanding of 12 signs playing on any of the 12 houses, that is,

12 × 12 or 144 effects.

Next, an astrologer has to know in which house each planet falls. This necessitates the understanding of 10 planets in 12 different houses, or:

10 × 12 or 120 different places.

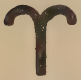
After this is done, aspects between planets have to be calculated, also aspects between planets and the Midheaven and Ascendant. The specific activity of each planet must be thoroughly comprehended before one can understand this planet combined with other planets, or "in aspect with" other planets. The ability to see at a glance the eleven major "aspects" takes considerable experience. The beginner has to tabulate them, until he gains facility.

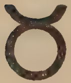
Having comprehended all these things, the next step is to see which aspects apply or separate in the actual chart the student is reading, and then, in the light of all that has gone before, to make judgment on potentialities of character, and the possible effect of the planets on the fields of human experience, e.g., if Venus is in Libra in the sixth house of work, it might tend to make the person a comparison shopper, or place him in some work where the ability to balance and compare is necessary, but Venus placed in Libra in the Ascendant might merely make the native beautiful, and well poised.

Only after this initial judgment is made on character and potentiality should the chart be progressed, that is, related to Time as a factor in bringing the potentialities into being and the events into manifestation.

We see, therefore, that the reading of a chart continually calls into play very considerable ability to weave each separate piece of knowledge into a concrete whole. It calls on the faculty of judgment, more than any other subject I know. It is not a subject for children, for in children the faculty of judgment is not developed, neither have they the necessary experience to handle the affairs of mature persons. Yet I have come across some children who can set up charts quite readily and who can read them, but then I have met child geniuses in other subjects too.

The symbols of the signs are:


the Ram, related to the head.


the Bull, related to the throat.

♊ Gemini, the Twins, related to the hands and lungs.

♋ Cancer, the Crab, related to the stomach and breasts.

♌ Leo, the Lion, related to the heart.

♍ Virgo, the Virgin, related to the intestines and bowels

♎ Libra, the Scales, related to the loins.

♏ Scorpio, the Scorpion, related to sex.

♐ Sagittarius, the Centaur, related to the thighs.

♑ Capricorn, the Goat, related to the knees.

♒ Aquarius, the Waterman, related to the ankles and calves

♓ Pisces, the Fishes, related to the feet.

The symbols of most of these signs are founded on: (1) The straight line which is either: (a) Perpendicular or (b) Horizontal.

The perpendicular line represents dynamic activity, force, the thrust downwards, the blow of the hammer, the sceptre of authority, spirit in action.

The horizontal line represents placidity, the material world and the earth.

(2) The circle. This represents totality, eternity, the whole universe, spirit in repose.

(3) The crescent moon. This represents the human soul. Turn the crescent moon on its side and it becomes a cup,—the soul was symbolized as a container which has to be filled with experience.

Let us now turn to these symbols, one at a time:

♈ *Sun in Aries, March 21-April 21.*

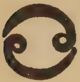
Aries is made by a perpendicular line with two half moons at the top, both turned downwards so that they hold nothing. They pour out. The spirit strikes down in swift activity. The moons cannot hold anything, hence when we say that Aries people spring swiftly into action, that they are pioneers and never collectors, we see that the symbol says it all for us. The symbol looks like a ram's horns, and it is called the Ram. It looks like the nose and the eyebrows of a man, so we say it rules the head and face.

♉ *Sun in Taurus, April 21-May 21*

Taurus is made up of a circle with a crescent moon above it. The symbol itself is all curves, so portrays our Taurean, who needs time to move,—no quick action. He is the settler who loves to stay put. The symbol looks like the horns of a bull, and is called the Bull. It also looks like the chin and Adam's apple in the throat, hence, it is said to rule the chin and neck.

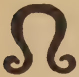
♊ *Sun in Gemini, May 21-June 21*

Gemini is composed of two perpendicular lines joined together, representing dynamic energy in duality, as positive and negative, male and female, heat and cold, etc. It is an ideograph of two people, two hands, and two lungs, hence related to manual dexterity, to breathing, speaking and inter-communication. It rules short journeys, on the theory that one cannot travel far crawling on one's hands.



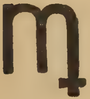
Sun in Cancer, June 21-July 23

Cancer is more complex. We have two small suns and two small moons. It is a picture of the human breasts, hence related to the mother instinct and also to nutrition. One moon is turned down to give, and the other is turned up to hold, for in the mother instinct there is a dual principle, one that will collect everything for the child, and the other which will give everything to the child. The symbol looks like a crab and so is called the Crab.



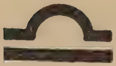
Sun in Leo, July 23-August 23

Leo is a picture of the human heart with its two valves. It is made up of two small suns (not closed in our modern representations), and two moons facing one another but joined, showing the flow of life from one sun (or spirit) to another. It therefore depicts the love instinct, and also children. The symbol looks like the head and mane of a lion and is called the Lion.



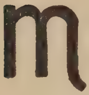
Sun in Virgo, August 23-September 23

Virgo brings us to a new type of symbol. It represents the three openings of the female body, with a cross on the third denoting virginity. It also represents the bowels, hence we say it is symbolic of the purifying and cleansing properties of nature, the tendency to refine. As the bowels do so much work, Virgo is said to rule work. As they have much to do with health, Virgo is the sign of health.



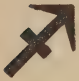
Sun in Libra, September 23-October 22

Libra is a picture of the Sun setting in the west. The horizontal bars represent nature in poise. The symbol looks like a balance and it is called the Balance. It is related to marriage and partnership. It is that which unites.



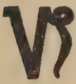
Sun in Scorpio, October 22-November 22

Scorpio is printed like a letter **m**, and represents again the three openings of the female body, but here the third one has no cross bar. It is open as after marriage. The symbol is called the Scorpion (serpent) and is related to sex, to experience, to investigation, death and regeneration.



Sun in Sagittarius, November 22-December 23

Sagittarius looks like an arrow. It was originally made of one perpendicular line with two cross bars, the top bar representing the thigh and the other the top of the knee. It is a symbol of the ability to walk long distances, hence is related to long journeys. As long journeys give experience, the symbol represents the highest faculties of the mind, philosophy, religion and law, the latter in the sense of the principles underlying specific laws.



Sun in Capricorn, December 23-January 21

Capricorn looks like the letter V with an S added. If you will look at a knee, you will see this symbol S represents the knee cap, and the V represents the lines of force around it. The knee is the part of a child which has to straighten out before a child can stand erect or climb, hence Capricorn is said to be the sign of ambition. It looks like the horns of a goat. In old pictures the Goat of the zodiac had a fish's tail,—and this was the S part of the symbol.

♒ *Sun in Aquarius, January 21-February 21*

Aquarius is a double set of zig-zag lines. It rules the ankles. The function of the ankle is to lift you up and help you to move forward when walking. One ankle goes down while the other lifts you up and carries you forward. The symbol looks like the waves of the sea which have been energized by the wind, hence it is said to be an Air sign, but it is represented by an urn, or by a waterman carrying an urn of water. It represents the circulation of the blood, or possibly the life sparks energizing the blood.

♓ *Sun in Pisces, February 21-March 21*

Pisces is made up of two moons (or fishes) tied back to back. It therefore represents two types of emotional content, the human and the divine, which look in opposite directions, but which cannot be separated. It denotes the struggle within man to balance two apparently contrary emotions, one that he must love divine things, and the other that he owes some affection to the people with whom he is living on the earth. The result is often an unhappy feeling that man is a spirit confined among earthly experiences, hence the sign is said to rule prisons.

From all this you will see that the symbolization of the zodiacal signs is based on the parts of the body and not on any Greek letters as some people have vainly imagined. Also note that I have given you the average dates when the Sun changes signs. It will happen in particular years that these may not be exactly right, therefore people born on or near the dates given have to look up an Ephemeris for their particular year in order to be quite sure in which sign their Sun is.

The next step is to learn the symbols of the planets and what signs the planets rule. Rulership is not haphazardly assigned but in a perfect system, as in Diagrams 3 and 4 (see page 35).

☉ The Sun rules Aries.
☽ The Moon rules Cancer.
☿ Mercury rules Gemini and Virgo.
♀ Venus rules Taurus and Libra.
♂ Mars rules Aries and Scorpio.
♃ Jupiter rules Pisces and Sagittarius.
♄ Saturn rules Aquarius and Capricorn.
♅ Uranus rules Aquarius.
♆ Neptune rules Pisces.
♇ Pluto rules Scorpio (and Aries too).

I think from the various clues you have gathered, in understanding the symbols of the signs, you can readily make out the meaning of the symbols of the planets.

☉ *The Sun* can represent in a chart the heart, the life energy, the father, the husband, the employer, the real self.

☽ *The Moon* can represent in a chart the stomach, digestion, absorption, the breasts, the mother, the wife, one's instincts in general, growth, and physiological changes.

☿ *Mercury* can represent in a chart the hands, mechanical ability, the lungs, music, nerves, young people, communication, letters, writings, and the ability of man to associate with others.

♀ *Venus* can represent in a chart the venous blood, song, beauty, attraction, cohesion, artistic work, a loved one.

♂ *Mars* can represent in a chart outgoing energy, creative capacity, mechanical and engineering ability, a soldier, an engineer, a worker in metals.

♃ *Jupiter* can represent in a chart justice, law, aspiration, principles, philosophy, religion, wealth, expansion, the arterial blood.

♄ *Saturn* can represent crystallization, organization, government, time and experience, the bones and the teeth.

♅ *Uranus* can represent the unexpected, the thunderbolt, electricity, originality and invention.

♆ *Neptune* represents gases, and the percolating capacity of gas and perfume, fermentation, distillation, dreams, unreality, the ethers.

♇ *Pluto* represents the change that must take place before a new thing can be started, or come into being.

Next one has to learn that just as there are chords in music, so there are in astrology. Having learned the signs in their never-broken sequence (they always follow around the zodiac in an endless circle), we next have to learn them in their relationship one to another.

(1) We learn them in opposites, or in polarities.

Aries opposite Libra
Taurus " Scorpio
Gemini " Sagittarius
Cancer " Capricorn
Leo " Aquarius
Virgo " Pisces

This learning of opposites is most important, for in every horoscope they are placed on opposite ends of the various spokes of the wheel. They act as balances to one another; for example, the dynamo of Aries is counterbalanced by the scales of Libra, or vice versa. Libra cannot make a move until Aries tips a pan of his scales. If opposite signs do not like one another they are at least necessary for one another,—so very necessary that if one ascends, the other descends.

(2) Next we divide the 12 signs into four classes. There will be three signs in each class. These sets of threes are called Trigons or Triplicities:

(a) Fire, or energizing signs: Aries, Leo, Sagittarius.
(b) Earth, or practical signs: Capricorn, Taurus, Virgo.
(c) Air, or mental signs: Libra, Aquarius, Gemini.
(d) Water, or emotional signs: Cancer, Scorpio, Pisces.

We count the planets in the various trigons in every horoscope. Sometimes all ten planets can occur in one trigon, or element. In such a case the characteristics of the element are very clearly shown. When all planets occur in water signs it indicates types of people who are swamped in their emotions. It is better to have some planets in each element to give a rounded nature.

In people who are decided types—that is, those who have four or more planets in one element—we find that Fire and Water types rarely like one another for long. Fire types get the Water types all steamed up for action, then as soon as these Water types are left to themselves, the Water runs down to its original level, until finally Fire gets discouraged about it. Fire and Air types may agree, but there can be thunderstorms. Water and Earth types agree very well, but neither can inspire the other. Air types agree quite well with either Water or Earth signs. Needless to say, each sign is harmonious to another in its own element. These elements are placed in the chart 120 degrees from each other, or, if we judge in time, about four months apart.

(3) Next the signs are divided into groups of three, and since there are 12 signs in the zodiac there will be four signs in each of these three groups, called the Quaternaries:

(a) Cardinal, or active signs: Aries, Libra, Cancer, Capricorn.
(b) Fixed, or determination signs: Taurus, Scorpio, Leo, Aquarius.
(c) Mutable, or mobility signs: Gemini, Sagittarius, Virgo, Pisces.

or in other words, those who move forward, those who stay where they are, and those who move around in circles. We have to count up the planets in the trigons and in the quaternaries in order to find our resultant type, which could be Cardinal Fire, or Fixed Earth, etc.

A Cardinal Fire type is so full of enthusiasm and activity that he is a go-getter. The Fixed Earth is so set and so practical in his ways that the Cardinal Fire type would consider him a mule, and the latter, in his turn, would consider the former as one who takes "awful chances".

I think if this introduction shows you nothing else, it will show that the whole chart, with every planet in its right place, is absolutely necessary in order to obtain a true judgment, and not just a parlor trick. There is nothing more stupid than thinking that because you are born in, for example, Leo, the other signs do not affect you. Every person is made up of 12 signs. Every person has a heart even if he is not born in Leo, and every person has a head and face even if he is not born in Aries. Saying, as some people ignorantly do, that they hate Gemini or they hate Pisces, makes about as much sense as saying that they hate their own hands and their own feet. A true astrologer bases his judgment on what all 12 signs are doing in every chart.

A chart is a study in relativity. If a planet is left or right of the Midheaven, or above or below the Ascendant, it may make a world of difference. How to obtain this Midheaven (tenth spoke) or Ascendant (first spoke) will be shown to you in Appendix I. These factors cannot be obtained unless you know your birth time. In the final chapter I will show you how the horoscope obtained from the various times when Mars and Saturn have conjuncted each other since 1936, reveals the countries actually now occupied or affected by war, and how it was possible to locate these areas far in advance of the wars which have occurred in them,—and all this without any psychic power,—just plain clear-cut mathematical knowledge, combined with an understanding of the nature of planetary effects.

II

The history of astrology could be written as a record of astonishing prophecies. I have not tried to emphasize this side of the subject, but rather to allow notable predictions to enter incidentally. There is a great history of astrology because the subject has been the backbone of all the major mathematical, astronomical and medical sciences. Who would have cared about Euclid or about spherical geometry if it had not been for astrology? Would we today know of logarithms if it had not been for Napier's astrological studies? There is also a great history of astrology because the philosophies of the world have used it as their fundamental groundwork. How can Plato's or Aristotle's concepts of the world be properly understood without a knowledge of their astrological patterning? How can Neo-Platonism be comprehended unless we know that it was based on ancient astrological concepts?

For some strange reason astrology has been put in the background by both philosophers and scientists for nearly two hundred years,—in much the same way that certain people put the sincere and honorable folk of their own home town out of their conversation because the latter are not fashionable.

No real history of astrology has been undertaken for hundreds of years, and, so far as I know, what was written in ancient times is not now extant, therefore much of what I have to say will come as a surprise to those people who think that astrologers throughout the ages have been potential jail-birds, for it has become customary for reference books to list our best astrologers in their astronomical sections, or in their medical sections, or in their scientific sections, or in their philosophical sections, and to forget to mention that they were astrologers at all. Then, in the astrological sections they are left with no names of consequence at all (or very few), and they constantly refer to astrologers as "the rabble," or some such undignified term.

One could write a history of lawyers, mentioning only disbarred lawyers. One could write a history of medicine, mentioning only the quacks. One could write a history of the church, mentioning only those who have been unfrocked or those who deserved to be. Such histories would be records of facts, but entirely false histories, for history should be a broad comprehension of all the facts available, which alone can reveal Truth. Such histories would create a very false impression of law, medicine and the church. So many false impressions have been circulated about astrology that the time has arrived when the real truth should be given out,—that astrology is such a noble and comprehensive study that nearly every mighty move forward in the world's history has been made by astrologers and in the cause of astrology. How would medicine have developed without Hippocrates and Galen? Would astronomy now be working with the Copernican system if a King of Poland had not decided to inaugurate the greatest astrological school in the world at Cracow, —and if a certain Copernicus had not gone there to study astrology?

Chapter 1

ASTROLOGY AMONG THE BABYLONIANS

"The history of Astrology is the history of the world."
ALAN LEO.

GARDENERS tell me that a plant needs the morning sun. All the sun of the afternoon will not compensate for the lack of morning sun. When I ask how long they have known this, they tell me "Always." I think then that it was the gardeners or the farmers who first discovered astrology. In some remote age a farmer lived, whose name is now lost, who made a most remarkable discovery, that the effect of the Sun's rays is different [1] at different times of the day. He therefore divided the heavens with imaginary lines into sections which we now call "houses." At first he made either six or eight divisions, but succeeding men made twelve houses. As time went on, other enterprising men had noted the motions of the Moon and the planets, and they decided that these also might have different effects at different times of day and night. Thus was Natural Astrology born. Later, by a process of analogy, men reasoned that the Sun, Moon, and planets affected individuals too,—and Judicial or Genethliacal Astrology was born.

Did Babylonian astrology precede that of Egypt, or vice versa? The story is that the discoveries were made independently, then a flood destroyed all the records and calculations of Egypt, whereupon the Egyptians asked the Babylonians to give them copies of their records. This the Babylonians promised to do, but when they sent the copies they falsified them, which the Egyptians gradually found out, and so had to start at the beginning again. Some authorities, including Professor Sayce, are of the opinion that there was astrological knowledge long before the Assyro-Babylonian period, and state that such knowledge has been found on the cuneiform tablets of the ancient people of Harran[2] and of Aramaea. This would be before the fourteenth century before Christ. In the light of this it is somewhat distressing to find that quite recently various critics of astrology have been publicizing statements to the effect that Judicial Astrology did not appear in Babylon until after 600 B.C. Judicial Astrology is the application of astrology to the lives and activities of persons, hence in order to refute this statement, we merely have to find out one or more persons born before 600 B.C. who received astrological advice on the conduct of their affairs, and not merely on weather.

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[1] *See* Appendix XIII.

There have been very few books readily available to friends of astrology giving facts on the history of astrology. This book is written with a view to presenting a general but comprehensive survey of a subject which has held the attention of people throughout the centuries. It is in the spirit, then, of letting facts speak for themselves that I ask my readers to walk with me a while, in order that truth may be revealed.

Let us see, first, what the great French archaeologist, Maspero, has to say that will bear on the above misstatement of facts.

In his *Dawn of Civilization*[3] he tells us how observation of heavenly movements and observation of what happened in events on the earth went on side by side in ancient civilizations. He says rulers consulted the astronomers of the day and imposed upon them the duty of selecting the most favorable moment for the execution of projects they had in view. He also says that from an early date each temple contained a library of astrological writings. One of these is considered to have been drawn up in the reign of Sargon the Agade and this was still the classical work on the subject in the seventh century before Christ, whence the astronomers royal of the day drew their answers.

Sargon the Agade flourished 3,800 years B.C., hence our critics are about 3,200 years out of line in their statement about Judicial Astrology not being known until after 600 B.C.

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[2] *Transactions of Soc. of Biblical Archaeology,* Vol. 3, pl. 67, i, 28, a-b.

[3] G. Maspero, *Dawn of Civilization* (S.P.C.K.), ed. by A. H. Sayce.

Let us next see what Professor A. H. Sayce, one of the ablest of the English experts and researchers on Assyriology, has to say, in Maspero's book, about the various tablets concerning Sargon:

> As I have always maintained the historical character of the Annals of Sargon of Accad, long before recent discoveries led Professor Hilprecht and others to adopt the same view, it is well to state why I consider them worthy of credit. . . . The campaigns of the two monarchs (Sargon and his son) *are coupled with astrological phenomena on which the success of their campaigns is supposed to depend.* We know the Babylonians were given to the practice and study of Astrology from the earliest days of their history; we also know that in the time of the later Assyrian monarchy it was still customary for the general in the field to be accompanied by the *asipu* or "prophet," [*Ashshaph* (astrologer) of *Daniel* ii] on whose interpretation of the signs of heaven, the movements of the army depended; and in the infancy of Chaldean history we should accordingly expect to find the astrological sign recorded along with the event with which it was bound up. At a subsequent period the sign and the event were separated from one another in literature, and had the *Annals of Sargon* been a later compilation, in their case the separation would assuredly have been made. That, on the contrary, the Annals have the form which they could have assumed only at the beginning of contemporaneous history, is to me a strong testimony in favor of their genuineness.

So here is Astrology being quoted by Professor Sayce as in itself a proof of the early (3,800 B.C.) date of the *Annals of Sargon.*

Now let us turn to François Lenormant, the French archaeologist, who wrote on the occult sciences of the Ancients. In his book *Divination and the Science of Prophecy of the Chaldeans,* he tells us how he studied and translated twenty-five certain tablets in detail. What do you think he found? He found that these were *the Table of Contents of one of the great astrological books which had been destroyed.* The tablets he translated were from the library of Assurbanipal of Nineveh (668-625 B.C.). Even on this our critics are quite a few years out of date, but also, if there was a Table of Contents then to books on Astrology, Astrology must have been flourishing in the reign of Assurbanipal and must have been invented ages before. Astrology could not have sprung up overnight.

Assurbanipal (called Sardanapalus by the Greeks) was the son of Esarhaddon (681-668), which king had succeeded Sennacherib who is mentioned in the Bible. Apparently both kings had their own astrologers, and some of the letters of these astrologers to the two kings still survive. Mr. R. Campbell Thompson [4] of the British Museum gives some of these letters, but Professor Leroy Waterman [5] of the University of Michigan gives more. We find in this correspondence the actual names of several royal astrologers:

Esarhaddon	employed	Akkullanu
"	"	Balasi
"	"	Ishtar-shumeresh
"	"	Nabun-adinshum
"	"	Nabua-heriba
Assurbanipal	employed	Adad-shumusur
"	"	Mar-Ishtar
"	"	Belu-shezib

Put into colloquial language this correspondence reads somewhat like the answers a modern astrologer makes on the telephone to a student or client who knows a little astrology and has already had a complete horoscope made:

Question: Is it a good time to allow my eldest son to visit me? (Remember here that Esarhaddon's predecessor had been murdered by two of his sons).

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[4] *Reports of the Astrologers of Nineveh and Babylon,* by R. Campbell Thompson, London, 1902.

[5] *The Royal Correspondence of the Assyrian Empire,* by Professor Leroy Waterman (Univ. of Michigan 1930-1936).

Reply: Yes, Venus is in the Ascendant.

Question: The same (on another day to another astrologer).

Reply: No, Mars is in the Ascendant.

Question: Is this coming eclipse going to disturb me?

Reply: No, there is no need to worry.

Question: Why haven't you written me what you promised about the benefits I could expect from Jupiter this year?

Reply: Sorry, I haven't had time.

Question: Is my son speaking the truth?

Reply: Yes, when the Sun is close to the Moon. No, when Saturn is close to the Moon.

Question: Tell me what Mars is going to do to me later on this year?

Reply: I will be sure to advise you nearer the time.

I think the reason why some of the commentators on these letters think they are so trite, and not exactly full horoscopes is that they never were intended to be full horoscopes. When I read them I was never so sure in all my life that human nature is the same in all ages, and I think any professional teacher of astrology will recognize them as exactly the type of questions that students and clients still keep on asking,—and apparently the kings of Assyria were no different from students of today. One even detects somewhat of the impatience of the astrologers with their royal student, when he asks too many questions, and worries himself unnecessarily over what Mars, Saturn, and various eclipses are going to do to him.

It is interesting to note that in Ancient Babylonia, Aries began the months. Let me quote the Hon. Emmeline Plunkett[6] who wrote *Ancient Calendars and Constellations.* I take various passages from this book in order that you may judge for yourselves:

> Page 6—*But further, there are astrological works in the library of Assurbanipal copied from ancient Babylonian originals.* The compila-

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[6] E. Plunkett, *Ancient Calendars and Constellations* (John Murray, 1903).

tion of many of these is placed by scholars in the reign of Sargon of Accad, at the remote date of 3,800 B.C.

Page 53—According to the evidence of the Standard Astrological Work, the compilation of which is generally attributed to 3,800 B.C., and according to the evidence of many other tablets, the year in Accad, and afterwards in Babylon, began not at the winter solstice, but on the first day of Nisan (Bar-zig-gar of the Accadians) the month of "the sacrifice of righteousness", and it was, as its name suggests, the month during which the Sun was in conjunction with the constellation Aries.

The month of Aries then began with the spring equinox when the Sun crossed the equator. This crossing (or passing over) of the equator is in the Jewish religion the period of the Passover, and in the Christian religion it is celebrated as the period of the Crucifixion, hence we see that the idea of sacrifice has always been inherent in the sign Aries, from Babylonian times down to the present.

Page 16—The astronomical and astrological texts drawn up for Sargon of Accad are entitled "The Illuminations of Bel."

Pages 9-10—We gather that the twelve divisions of the ecliptic had been mapped out at the time when the astrological works were drawn up, and that some (at least) of these divisions corresponded exactly to those now represented on celestial globes. . . . The suggestion put forward by Professor Sayce and other scholars that the 12 months corresponded to the 12 constellations of the Zodiac, and that we may trace a resemblance between the names of the month in the old Accadian language, and the constellation into which the Sun at that time of the year entered, is not in itself improbable. . . . The following months are those in which the resemblances are very striking:

1st month	Bar-zig-gar	(the sacrifice of righteousness)	Aries
2nd month	Khar-sidi	(the propitious bull)	Taurus
3rd month	Kas	(the Twins)	Gemini
6th month	Ki Gingir-na	(the errand of Ishtar)	Virgo

I think astrologers will readily see that the rest of the names of the months (as set forth herewith) contain very much the same line of thought as is found in modern interpretations of the signs.

The Accadian months were as follows:

	Accadian Month	*Translation*	*Abbreviation*	*Modern Sign*
1.	Bar zig-gar	The Altar of the Demiurge	The Altar or the sacrifice	ARIES
2.	Khar-sidi	The propitious Bull	The Bull	TAURUS
3.	Mun-ga	The making of Bricks	The Brick or The Twins	GEMINI
4.	Su kulna	Seizer of Seed	The Boon of Seed	CANCER
5.	Ab ab-gar	Fire making Fire	The Fire	LEO
6.	Ki Gingir-na	The Errand of Ishtar	The Errand	VIRGO
7.	Tul ku	The Holy Altar or Illustrious Mound	The Altar	LIBRA
8.	Apin dua	The Place where One Bows down	The Foundation	SCORPIO
9.	Gan ganna	The Very-Cloudy	The Cloud	SAGITTARIUS
10.	Abba uddu	The Cave of the Rising Sun	The Cave	CAPRICORN
11.	As a-an	The Curse of Rain	The Curse	AQUARIUS
12.	Se kisil	The Sowing of Seed	The Seed	PISCES
13.	Se dir	The (dark) (month) of sowing	....	....

The above is the complete list as given in *The Law of Kosmic Order,*[7] by Robert Brown, F.S.A. Gemini in modern interpretation rules the hands and the work of the hands, hence "the brick," which was used and made by hand, is appropriate. Cancer as the seed is good, since our Cancer is the mother sign. Fire making Fire is splendid for our Fire Sign, Leo. We still assign all errands and service to Virgo. The Altar for Libra is good, differentiated from the sacrifice of the Altar of Aries, for Libra is the judgment on the sacrifice rather than the sacrifice itself. The "Foundation" for Scorpio, the sex sign, would please the psychologists. The Cloud for Sagittarius is typical of the sign which rules ideas. In fact, we still use the phrase "up in the clouds" for an idea which has not yet been translated into some practical concept. The Cave for Capricorn is exactly right, the place of birth of the Christ Child. The Curse of Rain is good for Aquarius, while the Sowing of Seed for Pisces differentiates it from Cancer, which would rather refer to the seed about-to-be-impregnated.

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[7] R. Brown, *Law of Kosmic Order* (Longmans, Green & Co., 1881).

Brown also tells us that the Babylonians had presiding deities over the months. He says:

> The Assyrians and Babylonians, like the Jews, adopted the Aramaic Calendar which was in turn derived from that of Sumir and Accad:

NAMES OF THE MONTHS

	ENGLISH	ARAMAIC	ASSYRIAN	PRESIDING DIVINITY
1.	March-April	Nisan	Nisannu	Anu and Bel
2.	April-May	Iyyar	Airu	Hea
3.	May-June	Sivan	Sivanu	Sin
4.	June-July	Tammuz	Duzu	Adar-Sandan
5.	July-Aug.	Ab	Abu	Allat
6.	Aug.-Sept.	Elul	Ululu	Ishtar
7.	Sept.-Oct.	Tisri	Tasritu	Samas
8.	Oct.-Nov.	Marchesvan	Arakh-samna	Merodach
9.	Nov.-Dec.	Chisleu	Cuzullu	Nergal
10.	Dec.-Jan.	Tebet	Dhabitu	Papsukul
11.	Jan.-Feb.	Sebat	Sabatu	Rimmon
12.	Feb.-Mar.	Adar	Addaru	The Seven Great Gods
13.	Intercalary	Ve-Adar	Arakh-makru	Assur

He says, "The obscure Papsukul is identical, at least in some phases, with the planet Saturn. . . . Papsukul is called the Black Star." It was evidently associated with trouble or destiny.

He is thus comparable with our modern ruler Saturn for Capricorn, the tenth sign. I am not quite clear why Sin, who was the Moon god, should be the ruler of Gemini the third sign. I would have been inclined to think that he should have been assigned to Cancer or the fourth sign. Also, Nergal, who is similar to our Mars, hardly fits in with Sagittarius or the ninth month, but rather with Scorpio, the eighth month. Ishtar, the goddess always associated with "the Errand," would fit in with our concept of a ruler for Virgo. Since, however, our calendar of twelve months does not exactly coincide with a lunar calendar, it is probable that when the two calendars are compared in dates, we could agree with these assignments.

The thirteenth month is intercalary or incidental. Brown also tells us that each zodiacal constellation was placed on the heavenly maps between two extra-zodiacal constellations, thus making thirty-six original asterisms according to the scheme. I would like to mention here that modern astrology divides each sign into three parts termed decans of the signs, and that in occult astrology the use of the extra constellations is still used in emphasizing the inner meaning of the sign.

I have not been able to find any English translation of what the German archaeologist, Hugo Winckler, might have to say on the Babylonian technique of astronomy and astrology, but sometimes when we are looking for one thing we find another just as valuable. In a book entitled *Egypt in Asia*[8] by G. Cormack, I discovered that Winckler has some very pertinent observations on what is the matter with modern science; and he compares modern scientists with the scientists of Ancient Babylon very much to the discomfiture of the former. In *Das Alte Testament im Lichte des Alten Orients,* Doctor Hugo Winckler, in collaboration with Doctor Alfred Jeremias, says in effect that modern science has failed to build up a general conception of the universe; each particular branch of study has taken its isolated way, and no authority has correlated the totality of results. In this respect the Babylonians were far in advance of us. . . . The result was wrong only because the observation was wrong. The science of Shinar was based on religion. The Babylonians interpreted the sky by terrestrial analogies. Therefore, the visible crises of the sky offer a sublime analogy to the vicissitudes of the lower world; and the destiny of nations and peoples is written in the stars, hence their science of nativities and horoscopes. A science such as that of Shinar, based on religion, could never banish moral ideas from the world, for in their analogy of reasoning, the Sun by its very light and splendor was a type of good, and the Sun always wins out. It has a daily triumph each morning over the dark forces of night. It triumphs each spring over winter. No modern scientist has ever brought these matters home to the people as a moral issue, taught by the universe itself in analogy, in the way these early Babylonians did.

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[8] G. Cormack, *Egypt in Asia* (Adam and Charles Black, 1908).

Both the Egyptians and the Babylonians believed that the planets were gods, or that the spirit of the god resided in the stars. Sayce in his *Religion of Egypt and Babylonia* (p. 481) tells us:

> At the time when the pictorial hieroglyphics were first formed, the star was already the symbol and representation of the divine. At most we can only suggest that the zi, or spirit, was localized in the star. A spirit of the sun was as conceivable as a spirit of Ea,—and the son of Ea, it must be remembered, became a sun-god. "The zi of the god" meant originally the "spirit of the Star".

This thought of the stars being gods or spirits of gods was particularly developed by Plato and Aristotle. They said that the stars are inhabited by human souls, and that human souls are stars. In his *Metaphysics* Aristotle said, "Our forefathers in the most remote ages have handed down to us, their posterity, a tradition in the form of a myth that these substances [i.e., the stars] are gods, and that the divine encloses the whole of nature."

Aristotle's and Plato's theories have come down to modern occult schools by way of the Neo-Platonic schools of thought.

The great gods of the Babylonians were assigned to the planets as follows:

Shamash	Sun
Sin	Moon
Marduk	Jupiter
Ishtar	Venus
Ninib	Saturn
Nergal	Mars
Nebu	Mercury

Sin, the Moon god, was particularly worshipped at Ur of the Chaldees. Marduk really took the place of Bel, who was transplanted to heaven. Nebu, or Nabu, like our modern Mercury, was considered to be "the supreme watcher." He was the son and minister of Marduk. Nergal, like our Mars, was the god of battles, of pestilence, and of the dead, even as Mars in modern horoscopes rules both the things of Aries and those of Scorpio (death). We might note that in the Bible, II *Kings* xvii:30, we are told of the men of Cuth making an image of Nergal to save them from lions.

In the Babylonian *Tablets of Creation* we are told at the end of the 4th tablet that the old gods Anu, Bel and Ea were a trinity sent to inhabit the heavens. This may have been the origin of the three[9] heavens of the mediaeval period, the heaven of the fixed stars, the primum mobile and of the empyrean, but I have no proof as yet of this. The beginning of the 5th tablet, however, is most interesting in showing us the twelve-fold division of the constellations and of the twelve-fold division of the houses of the horoscope. I use the translation as given by Robert Brown, F.S.A., in his book *Eridanus*:

> He (Anu) made excellent the mansions [i.e., the twelve celestial houses] of the great gods.

---

[9] Three spheres above Saturn. See Chapter on the Kabbala, page 85.

> The constellations he placed in them, the stars of the Great Bear he fixed.
>
> He arranged the year according to the bounds [or signs of the Zodiac, Mazzaroth, Hebrew] that he defined.

From this I think any astrologer would recognize that the twelve-fold house division of the horoscope and the twelve-fold divisions of the heavens had been definitely established at that time.

Continuing, the tablet goes on:

> For each of the 12 months, he fixed constellations of three-fold nature. [These would be our decanates.]
>
> From the day when the year comes forth until its close.
>
> He founded the station of Nabir [Jupiter] to determine their bounds, that none might err or go astray [Jupiter is the astrological god of judgment, the understanding of what is divinely right and scientifically fitting].
>
> He set the mansions of Bel and Ea along with himself.
>
> He opened great gates on both sides [of the heavens].
>
> > [These gates are the sunrise and sunset places, and astrologically speaking, our ascendants and descendants of the day.]
>
> He made strong the bolts on the left and on the right [i.e., East and West].
>
> In the midst thereof he fixed the zenith.
>
> The Moon-god he caused to shine forth; the night he entrusted to him. He appointed him, a being of night, to determine the days.

In other Babylonian tablets and pictures we find that every morning Shamash (the sun) steps through the eastern gate which is upon the mountain of the sunrise, and makes his great journey across the heavens until he finally steps forth through the western gate on Mount Sunset. These mountains with gates, or sometimes clefts in them, remind us of the mystical lines of Tennyson:

Twin mountain peaks
Cleft before the sunrise

In a Babylonian hymn addressed to Shamash, as lord of the setting sun, we have these lines:

O, Shamash, thou art the judge of the world
Thou directest the decisions thereof.

This would entirely harmonize with modern astrological ideas that Libra, the sign of the Sunset (in the natural chart) is the sign of the Balance or Judgment. Hence, even if Libra does not appear in the Babylonian zodiac in the symbol of a balance, the concept of balance, judgment and law was given to the west, the natural position of Libra.

The council chamber of the gods where destiny and fate were decreed or started was in the East on Mount Sunrise. From this we see that Aries, which we term the sign of beginnings of action, was given much the same assignment as in our modern astrology. The destiny starts in Aries and is judged in Libra. I wrote a series of twelve articles [10] some years ago, proving that all inception of action in the physical world begins in Aries, hence I appreciate the fact that the Babylonians thought so too. And this start is irrespective of the Sun Sign.

Diodorus tells us (ii, 29-31) that the Babylonians called the five planets the five "Interpreters," because they actually foreshadowed not only the destiny of individuals but also the destiny of nations. Also, some one of the five had to preside over the birth of each person in the world. From all of which we must presume that the Babylonian astrology was not merely "weather predicting," as some people today have decided to tell us. It was "judicial." Diodorus also tells us that besides the planets there were thirty stars, which were called "consulting gods." Now, whether Diodorus intended to state thirty or thirty-six is somewhat doubtful. If thirty-six, then these would be assigned to the thirty-six decanates, or the threefold division of each of the twelve signs. But perhaps if only thirty were used, then decanate divisions might not have been used for Cancer and Leo; or perhaps, since the Babylonian year was (according to Lenormant) one of[11] 360 days, there could have been thirty "consulting gods," one for each day of a solar month. Besides all this, Diodorus says that there were twenty-four stars called "Judges of the World," of which twelve are northern stars and visible and twelve are southern stars and invisible. The visible ones were assigned to living people and the invisible ones to the dead. Astrologers, at least since the time of Ptolemy, have experimented with the fixed stars when interpreting charts, though our main prognostication is still with the planets.

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[10] "Destiny and the Ascendant," in *Student Astrologer.*

Campbell Thompson in his book *Reports of Magicians and Astrologers of Nineveh and Babylon,* says that the Babylonians distinguished between a spherical method of calculation from the viewpoint of the observer, and a cosmical method from the viewpoint of the stars. Perhaps by this we may see that there was some knowledge then not only of geocentric calculations but also of heliocentric ones. Methods of horoscope delineation by means of heliocentric positions have been tried in recent years, but as far as I have been able to work with these maps they reveal very little, for the simple reason that we live on the earth and not on the sun. Hence, as it is the geocentric method that has come down to us through the Babylonians and Chaldeans, it is more than probable that when making astrological charts they must have used the geocentric method.

The Babylonians and Chaldeans seem to have been very well acquainted with what are sometimes called "the seven planets". Some archaeologists have apparently also noted that the planets, as shown on their uranographic stones, appear in the following order in practically every case: Moon, Sun, Mercury, Venus, Saturn, Jupiter, Mars. For this reason some superficial commentators have tried to prove that the Babylonians did not know their real heliocentric order. It is necessary to know some astrology before one understands why this order appears so constantly.

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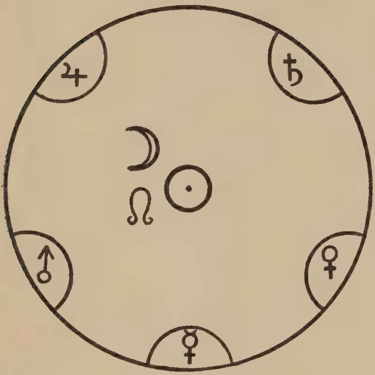
[11] *See* Appendix II.

Rawlinson, in his book *Five Great Monarchies,* shows a drawing of a uranographic stone in which we have the Sun and Moon in the center,—the Moon as Crescent and full, together with her North Node (Diagram 1). Around the edges are five altars (an elementary heliocentric system). The symbols used to portray which particular gods the altars belonged to are comparable with our own symbolization of the planets, though not identical, e.g., we say that Mercury rules writings and scribes, hence any modern astrological student would not object to a pen or pencil being used as a symbol of Mercury. When we actually find on this uranographic stone the wedge or arrow-head which was the basis of all cuneiform writings, we know that this altar was the one dedicated to Mercury. These five altars are placed around the stone in the order we have in Diagram 1.



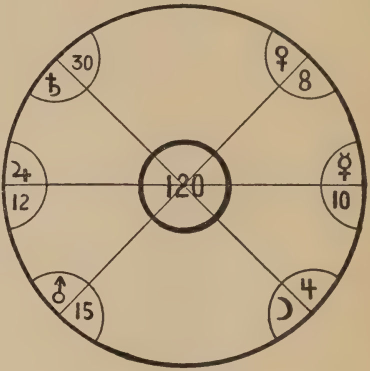


DIAGRAM 1, *left.* Diagram of a Uranographic stone showing the Sun, Moon and North Node in the center and the five altars of the five planets. (Based on Rawlinson's picture.)

DIAGRAM 2, *right.* Illustrating the periodicity of planets.

The Sun and Moon here are considered somewhat as a unit, or as man and wife. But in an order where all seven are denoted, the Moon precedes the Sun, for the Moon rules the sign Cancer or the primordial waters out of which, the Babylonians said, all things come, or as the Bible has it, "And the Spirit of God moved upon the face of the waters."

The Moon and Sun are followed by their attendants,—Mercury is closest to the Sun, though how the Babylonians discovered him without instruments is one of the wonders of the world. Maspero tells us that the priests trained young boys from seven years of age until they developed very great visual capacity. Venus then followed in her right order. Why, then, did they not put the rest in their correct astronomical sequence: Mars, Jupiter and Saturn? Some people have surmised that they considered these three as sons of the Sun and Moon, and in all countries where primogeniture is the rule, it would be a great error in etiquette not to mention them in their order of birth,—Saturn, Jupiter, and Mars.

When astrology was studied in the early Christian days, Saturn, Jupiter, and Mars become the Three Wise Men, and it is most interesting to note that about 6 B.C. there was a conjunction of these three planets, also that the Anglo-Saxon Chronicle speaks of the Three Wise Men who visited the Christ Child as Three Astrologers. Now, lest you consider the date of this triple conjunction of planets too early to have heralded the birth of Christ, let me quote from the work of a Roman Catholic priest, Father Isidore O'Brien. In his *Life of Christ,* he reviews all the available facts concerning the birth-year of our Lord, saying:

"As we have seen in the fourth chapter, the birth of Christ took place at least four years earlier than the Abbot Dionysius had computed. . . ." Also, in another section: "Christ may have been born 6 B.C. Some authors place the sacred date back as far as 7 B.C."

Going back to the Chaldean sequence of planets, there is a better reason for their order than I have given above. The ancient people had not only observed the planets over periods of years, but they had discovered their periodicity. They found:

Periodicity of Saturn conjunction same asterism is 30 years approximately.
Periodicity of Jupiter conjunction same asterism is 12 years approximately.
Periodicity of Mars conjunction same asterism is 15 years approximately.
Periodicity of Venus conjunction same asterism is 8 years approximately.
Periodicity of Mercury conjunction same asterism is 10 years approximately.
Periodicity of Moon conjunction same asterism is 4 years approximately.
Periodicity of Sun conjunction same asterism is 19 years approximately.

If we put the Sun in the center, and arrange the others around it (Diagram 2, p. 32) we have an elementary notion of a heliocentric [12] system, but furthermore, if excluding the Sun, we take the common denominator of the periodicity years, we have the number 120, and from this we can get quite remarkable results which will give us in all probability the very earliest idea of how a horoscope was conceived.

Consider the common denominator of 120 and divide this by the periodicity of each planet. Let us take Mars first. Its periodicity is 15. Now, 15 into 120 yields 8, and in our Diagram No. 2, Venus has a periodicity of 8, hence it is placed on the opposite side of the wheel, since it is the complementary opposite of Mars. Next let us take Saturn whose period is 30. Thirty into 120 yields 4, which is the period of the Moon, hence the Moon is placed on the opposite side of the circle to Saturn. And so on with Jupiter, whose periodicity is 12. Twelve into 120 yields 10, which is the periodicity of Mercury, hence these two planets are placed in opposition.

When we come to consider our modern horoscope, that is, the natural one with the planets in their own signs (see Diagram 3, below), we find that this principle of complementary opposites is still maintained. I might mention here that Saturn is considered as a polarity of both the Sun and of the Moon. Our modern horoscope (which is very ancient) reveals that it was built with a knowledge of the astronomical order of the planets. (See Diagram 4, below).

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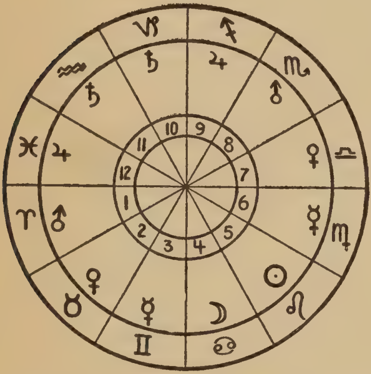
[12] *See* Appendix II.



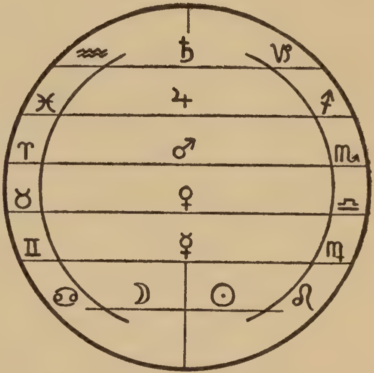


Diagram 3, *left.* The "natural Zodiac." The Moon rules Cancer and is the polarity of Saturn. The Sun rules Leo and is also a polarity of Saturn.

Diagram 4, *right.* Note the Sun and Moon rule one sign each. The other five planets are in their astronomical order from the Sun and rule two signs each.

Another factor which evolved out of all this was that of the planetary hours which seem to have provided the basis of so much of the philosophy attendant upon astrology that was taught right down to the early Middle Ages, when the Sun was always considered to be the Center,—a matter which seems strange in days when the heliocentric system had not yet been rediscovered. The planetary hour sequence is even inherent in the seven-branched Jewish Candlestick. (See Diagram 5, below). Note that in all Dante's work the Sun is the center.

The sequence for the planetary hours apparently always has been: Saturn, Jupiter, Mars, Sun, Venus, Mercury, Moon, in an endless circle (see Diagrams 6 and 7, p. 37).

According to the younger Lenormant there were twelve "hours" in a Babylonian day, that is, 12 periods of time called "hours" which would equal two hours of our modern day. But with a 12 period day we cannot get a sequence which will allot the first hour of Sunday to the Sun, and the first hour of Monday to the Moon, hence we may presume they subdivided their *hours* into two parts, or it could be that the earliest division of a day was what we call morning, afternoon, and night. Hence, if sunrise starts at 4 A.M. then noon begins the afternoon and 8 P.M. begins the night. Now, allotting the planets in their Babylonian order over the days in sequence, we have our simplest planetary hour arrangement, thus:

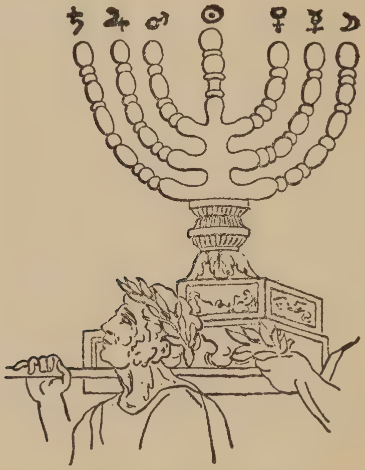


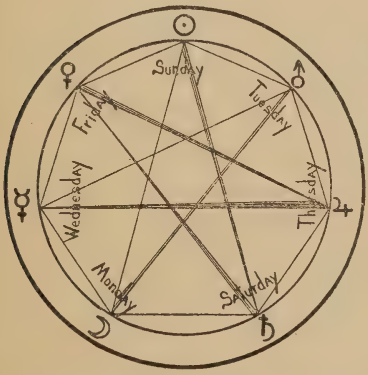
DIAGRAM 5. Jewish candlestick with planetary hour system applied.

Sunday	*Monday*	*Tuesday*	*Wednesday*	*Thursday*	*Friday*	*Saturday*
Sun	Moon	Mars	Mercury	Jupiter	Venus	Saturn
Venus	Saturn	Sun	Moon	Mars	Mercury	Jupiter
Mercury	Jupiter	Venus	Saturn	Sun	Moon	Mars

In this elementary method:
The Sun rules the morning of Sunday.
Venus rules the afternoon of Sunday.
Mercury rules the night of Sunday.

Then on Monday the Moon can start the day.
on Tuesday Mars can start the day.
on Wednesday Mercury can start the day.
on Thursday Jupiter can start the day.
on Friday Venus can start the day.
on Saturday Saturn can start the day.

The system, therefore, shows us why the various days have been held sacred to these gods and goddesses. Diagram 6 may


☉
Sunday
♀
♂
Tuesday
Friday
Wednesday
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Thursday
♃
Monday
Saturday
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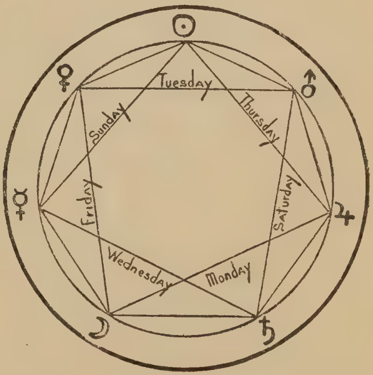
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Diagram 6, *left*. The planetary hours follow around the circumference. The days of the week are found by crossing the circumference.

Diagram 7, *right*. Each triangle gives the 3 planets which would rule a third part of the day (traveling counterclockwise around the circumference).

make the matter clearer, where the planets on the circumference are in planetary hour sequence and by crossing the circle one arrives at the next day. Diagram 7 shows the three planets ruling each day.

I think the only person I know who has done any original research on our modern planetary[13] hour system is Dr. L. H. Weston who has published several pamphlets in which he states that the right sequence starts with the New Moon each month, rather than with sunrise each day. Perhaps the whole matter is one on which continued research is still necessary.

Probably only the priests of Babylon themselves knew all the various intricacies of their astrology. The people, however, were taught quite a little in their myths and legends. Just as we have among the later Greeks a story of a solar hero Hercules with Twelve Labors, and in Christian times the story of King Arthur, —both sets of legends being of astronomical origin,—so Babylon created a wonderful series of stories of a solar hero Gilgames (or Izd-hubar), whose life was told in twelve epic songs, each episode relating to a sign of the zodiac; for example, Gilgames meets the scorpion men in the sign Scorpio. He reaches the "waters of death" at the winter solstice, Capricorn, and so on. These stories are given in George Smith's *Chaldean Account of Genesis* and also in Lenormant's *Beginnings of History*.

The story of Gilgames as told on the Babylonian tablets is as follows:

Tablet One is missing. It probably related to Aries.

Tablet Two: The hero Gilgames has a dream which he cannot interpret. He therefore sends for the wise seer, half man and half bull, named Ea-bani, who lives a long way off. This is an episode of Taurus, the Bull.

Tablet Three: Ea-bani travels to Gilgames' palace where there is a great feast in his honor. The two men become fast friends. This would typify the sign Gemini.

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[13] *See* Appendix III.

Tablet Four: Both set out to attack a tyrant. The wanderings are typical of the wandering Moon sign, Cancer.

Tablet Five: The tyrant is killed. Here we have reached the conquering hero sign, Leo.

Tablet Six: The goddess Ishtar asks Gilgames to marry her. He refuses. This happens in the sign of the Virgin.

Tablet Seven: Gilgames has more frightful dreams. When he asks Ea-bani to interpret these, the latter falls sick and dies. Libra is the sign of the partner and of the setting sun dying in the west.

Tablet Eight: Gilgames searches for the secret of life. He meets two man-scorpions who guard the setting sun. He is allowed to visit a garden of apples, over which two nymphs preside. The tablet suggests the sign Scorpio.

Tablet Nine: He is allowed to carry away some of the fruit. He finds a boatman and with him Gilgames sails "the waters of death." The ninth sign, Sagittarius, is that of the long journey.

Tablet Ten: He meets the immortal one who holds the secret of life, and questions him of immortality. Here we have the sign Capricorn, always symbolized as the sign of immortal birth, and commemorated now as the birth-month of our Lord.

Tablet Eleven: Gilgames is told the meaning of the Deluge. Later he is purified and healed of all his sicknesses and of his bad dreams. He then returns to his own country. This refers to Aquarius, the sign of the realization of one's objective journey in life.

Tablet Twelve: He laments at the tomb of his dead friend Ea-bani. The god Marduk descends and calls the soul of Ea-bani back from the land of shades. Ea-bani comes to life but he is almost immediately taken up to the skies, where he shines forever as a star. Here we have the sign Pisces, where the purified mortal longings are finally fused with the immortal longings into one bright whole.

It was in songs such as these that the Babylonians taught their people that the quest of the individual for immortal life was analogous to the heroic struggles of the Sun god, his life, work, and activities in his annual passage through the twelve signs of the Zodiac.

We close this chapter in noting that the knowledge of ancient Persia impinged upon Babylon, perhaps before Persia conquered Babylon, but certainly afterward. The Persians produced at least one very wonderful astrologer, whose name has come down through the ages. This was El Hakim, or Gjamasp, who wrote a book, *Judicia Gjamaspis*. In this he spoke of the effect of the conjunctions of Jupiter and Saturn on world history. The Arabs treasured this book, and translated it into Arabic under the title *Al Keranai,* and when the European nations began their translations of Arabic books on astrology, Lali translated *Al Keranai* into Latin under the title *Judgments of the Grand Conjunctions of the Planets, and on the Events Produced by Them.*

From various of these Jupiter-Saturn conjunctions, Al Hakim prophesied the date of the coming of Christ, the abolishment of the Magian religion, and the rise of the Mohammedan religion. Consequently, his predictions carried forward eleven hundred years beyond the time he lived. He was court astrologer to Hystaspis (548-504 B.C.), so when our critics say there was no astrology of any account before 600 B.C., we find in Gjamasp, not an amateur or one struggling to find out whether human life was shown by the planets, but a most finished and accomplished astrologer with centuries of astronomical observation behind him, and also centuries of astrological observation concerning the effect these two planets have on political and religious matters. The minor conjunctions (called Mutations) of Saturn and Jupiter occur only every nineteen or twenty years, and the major ones (in which trigons[14] are changed) occur every two hundred and forty years, while the Grand Conjunction or Mutation occurs only once in approximately 960 years, when the same trigon recurs.

It was this fine type of astrology that enabled Daniel, Esdras, and other prophets to make their long distance predictions. Diodorus tells us (ii, 24-25) that Ctesias wrote of a priest-astrologer named Belysis who made his observations first hand, and from his astrological knowledge decided in 876 B.C. to assist Arbaces the Mede in overthrowing Sardanapalus.[15] Surely this was judicial astrology, and since Belysis did not invent astrology, it must have been a highly technical art in his time.

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[14] *See* Chapter 20.

A good deal of our knowledge of ancient Persia is drawn from Greek and Roman writers who quoted Ctesias, who was a physician, born of a family of physicians at Cnidus in Caria. He became court physician-astrologer to King Artaxerxes. In his spare time at Court he wrote the history of Persia in twenty-three books, from the earliest times down to about 398 B.C. Only fragments of this history have survived, but various Greek and Roman authors, including Diodorus, quote from him.

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[15] *See* under Byron, who wrote a play *Sardanapalus.*

Chapter 2

EGYPTIAN ASTROLOGY

It is remarkable that the Moon, which was so important, especially in Babylon, never rivalled the Sun among the Egyptians . . . the reason is clear: The Moon is the easiest regulator of time for primitive man.

W. MAX MÜLLER, *Egyptian Mythology.*

I WILL admit that looking into the translations of the Sallier Papyrus IV, Egypt, is somewhat like looking at Sun Sign readings done by a crazy person. Maspero in his *Dawn of Civilization* [1] gives us some light on the contents of this papyrus. He says:

> The days, moreover, had each their special virtues, which it was necessary for man to know if he wished to profit by the advantages, or to escape the perils which they possessed for him. There was not one of them that did not recall some incident of the divine wars, and had not witnessed a battle between the partisans of Set and those of Osiris or Ra; the victories or the disasters which they had chronicled had, as it were, stamped them with good or bad luck, and for that reason they remained forever either auspicious or the reverse.

Yet reading further in Maspero we might surmise that these could not all have been based on Sun Sign readings, but that some might have been based on planetary hours, and here we find one of our early clues to planetary hours. Maspero says:

> The Hours of the night were all inauspicious, those of the day were divided into three "seasons" of four hours each, of which some hours were lucky, while others were invariably of ill omen.

From this I would conclude that the planetary hours were assigned only to the day and not to the night and their luck or ill luck depended on what planets were assigned for the time. Yet, on the other hand, some Sun Sign interpretation must have been used, it would appear from such statements as:

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[1] *Dawn of Civilization,* by G. Maspero (S.P.C.K.)

> The 4th of Tybi: good, good, good. Whatsoever thou seest on this day will be fortunate. Whosoever is born on this day, will die more advanced in years than any of his family; he will attain to a greater age than his father.
>
> The 5th of Tybi: inimical, inimical, inimical. This is the day on which the goddess Sokhit, mistress of the double White Palace, burnt the chiefs when they raised an insurrection. . . . Offer bread to Shu, Phtah, Thot, Hu-Su, on this day.

In this threefold repetition of good, good, good, one might be inclined to see the threefold "seasons" of the day, or three good planetary hours in succession. The knowledge concerning "Egyptian" days spread to Greece, Rome, and all the outposts of the Roman Empire,—Gaul and Britain.

Because there was so much of this type of astrological work among the Egyptians, our critics have stated that there was absolutely no judicial astrology in Egypt until Berosus[2] founded a school at Cos about 280 B.C. We might mention here that Berosus did teach in a school at Cos about that time, taking with him as his material some of the material of the Illuminations of Bel. He did not invent astrology.

Professor Sayce is one authority for saying that the positions of the stars were plotted out in ancient Egypt as early as the thirteenth century B.C. Perhaps here we need to define once more Judicial Astrology. It could be defined as the analogy between the affairs of any human being and observed conditions in the heavens. My thought is that the material collected in the Sallier Papyri was given to the people in general, just as Sun Sign readings are today, but that real astrology was reserved for the priests, the scribes, the Pharaoh, and the princes.

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[2] *See* Chapter 3, page 58.

Let me tell you what the renowned French Egyptologist, Jean François Champollion, found in the tomb of Rameses II (called Sesostris by the Greeks). Rameses II lived about 1292-1225 B.C. Champollion found massive circles of wrought gold divided into 365° and each degree marked the rising and setting of the stars for each day. When objects were placed in the tombs of the Pharaohs, it was because they were important for them to have in the next world. Why should Rameses want to know the rising and setting of the stars? For the same reason, I imagine, that thousands of astrologers do. Many people today who cannot make their own star observations or who do not have ephemerides and table of houses handy, carry Ascendant finders—that is, double cards, the under one of which revolves and can indicate through a slot in the upper card the Ascending degree of a sign at any time of day that is required. Why were there no textbooks in the tomb? Because a good astrologer no more needs his textbooks after he has learned his art than a concert pianist needs his music score in front of him when he gives a recital. He needs his piano,—and an astrologer needs the Ascendant.

We must not forget that according to all history and tradition the Pharaohs of Egypt were not only rulers, but each was pontifex maximus of his time and knew all the secret sciences. Lest my theory seem too far-fetched, let us go on to what Champollion found in the tomb of Rameses V, a successor of Rameses II. He found papyri giving tables of constellations *and their influences on human beings for every hour of every month of the year*. Here is the translation of the last part, for the fifth month of the year:

MONTH OF TOBI: The last part. Orion rules and has influence over the left ear.

1st Hour: The constellation Orion rules and has influence over the left ear.

2nd Hour: The constellation Sirius rules and influences the heart.

3rd Hour: The influence of Gemini appears and influences the heart.

4th Hour: Gemini influences the left ear.

5th Hour: The stars of the River [probably Eridanus] influence the heart.

6th Hour: The commencement sign Leo influences the heart.

7th Hour: The Arrow influences the right eye.

8th Hour: The Long Stars influence the heart.

9th Hour: The servants of the hind parts of the quadruped Menthe influence the left arm.

10th Hour: The quadruped Menthe has influence over the left eye.

11th Hour: The servants of Menthe influence the left arm.

12th Hour: The foot of the Truie has influence over the left arm.

So the descendant of Rameses II took with him the findings of both the astronomers and astrologers of his time, to guide him hour by hour. The Egyptians believed in the mutual interdependence of all things in the universe and because of this they also believed in the inter-relationship between what was going on in the heavens and what was going on in the earth, going on in nature as a whole, and in human bodies and in human affairs. These papyri may not look at first like our modern highly technicalized horoscopic wheels, but they do show that knowing the Ascendant was the all-important thing then, even as it is now. This is the reason why in all my class work in Astrology, as far as possible, before I train students to sit down with pencil and paper and calculate charts to split seconds, I try to make them work in "mental arithmetic" fashion, until in the subway or at any place without pencil or paper, they can within a few degrees know what Sign is ascending, for only by knowing this can the environment be known and the proper relationship of the parts (planets) be understood, in a specific whole. Working in this way they discover quite early in their work that in all astrology it is "relativity" that counts.

These papyri of Rameses V were undoubtedly the current *vade mecum* of astrologers in Egypt. I have every reason to believe, in comparing them with Hebrew astrology such as is found in the early Christian centuries in the *Sephir Yetzireh,*[3] that it was this type of astrology that was not only common among the Chaldeans, but which entered the oral tradition of the Hebrews, and this gives some support to the statement of the *Sephir Yetzireh* that the knowledge it contains was handed down by Abraham who came from Ur of the Chaldees.

Also, in the drawings and art work of Ancient Egypt we find clues that their gods were astronomical myths and astrologically assigned. From the book entitled *The Sarcophagus of Seti, the First, King of Egypt, 1317* B.C.,[4] by Wallis Budge, I quote the following from page 21:

> On the outer edge of the Sarcophagus is a mutilated line of inscription, which contains a series of speeches by Mestha, Hapi, Tuamutef, and Qebhsennuf, the Four Sons of Horus,—that is, the gods of the cardinal points. . . . These deities took under their protection the intestines of the deceased, which were embalmed and placed in four jars of a special shape to which the name "Canopic" has been given. Each jar was dedicated to a son of Horus, and was provided with a cover, which was made in the shape of the deity to which it was dedicated. The "Sons of Horus" were:
>
> (1) Mestha (human head). The cover of his jar was man-headed. He was god of the South, and protected the stomach and large intestine.
> (2) Hapi (dog head). The cover of his jar was dog-headed. He was god of the North and protected the small intestine.
> (3) Tuamutef (jackal head). The cover of his jar was jackal-headed. He was god of the East, and protected the lungs and heart.
> (4) Qebhsennuf (hawk head). The cover of his jar was hawk-headed. He was god of the West and protected the liver and gall bladder.

Astrologers will have no difficulty in realizing that these four "Sons of Horus" are the four fixed Signs of the Zodiac or their rulers.

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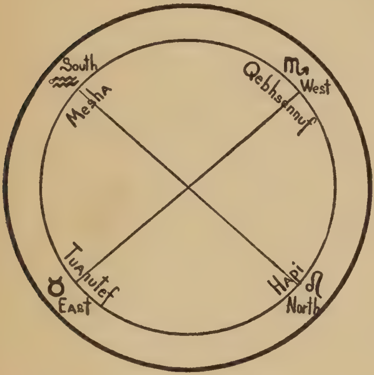
[3] *See* Chapter 7.

[4] Published by Sir John Soane's Museum, London, 1908.

Mestha (human head) is Aquarius—South
Hapi (dog head) is Leo—North
Tuamutef (jackal head) is Taurus—East
Qebhsennuf (hawk head) is Scorpio—West

This should be especially clear after considering Diagram 8.


South
♒
Mesha
Qebhsennuf
♏
West
Tuamutef
♉
East
Hapi
♌
North

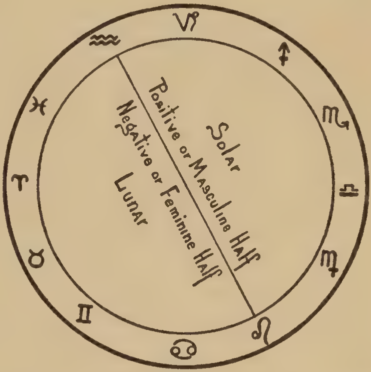

♑
♒
♐
♓
Positive or Masculine Half
Negative or Feminine Half
Solar
Lunar
♏
♈
♎
♉
♍
♊
♌
♋

Diagram 8, *left*. The four sons of Horus. The original Southern position of Aquarius is now South by East, due to precession.

Diagram 9, *right*. Diagram showing the positive and negative halves of the zodiac.

General readers should note here that in astrological charts, since the astrologer faces South and not North in making maps, the East is on the left hand and not on the right hand. Now, allowing for the precession of the equinoxes,[5] or the apparent backward movement of the equinoxes in the Zodiac, we find that these four signs today are not Cardinal Signs. They were not really Cardinal in Seti I's day, but they were still called Cardinal. By Cardinal Signs we mean those that are at the four points of the compass. In dealing with Greek astrology we shall mention these four Signs again, for to them belongs an amazing quantity of literature which is at least as early as Ezekiel, but whose basis was known probably ages before even Seti I, that is, before the fourteenth century B.C. The matter is as old as the story of the Garden of Eden with its four rivers. We find these four signs also in Aztec and Mayan sculpture.

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[5] *See* Appendix XII.

The religious processions of the Egyptians were not complete without astrologers and the sacred astrological books. We have a description of them in the writings of Clemens Alexandrinus, who flourished during the period from Emperor Severus to Caracalla, that is about 193–217 A.D. Of course Clemens may have been describing a procession he saw in his own day; nevertheless, religious processions are usually matters wherein essential rites originate far back in the ages.

Clemens studied mainly at the Christian School in Alexandria where he became a Christian, but he seems to have been very much interested in all that was best in other faiths. In his writings he shows that he understood that some knowledge of astrology was a very important element in understanding the Egyptian religion, for in describing the procession, he brings out the following matters:

> The Egyptians follow a peculiar philosophy of their own, which may best be declared by setting down the order of their religious processions. First, therefore, goes the Precentor carrying two of Hermes' books along with him; the one which contains the Hymns of the Gods, the other Directions for the kingly office. After him *follows the HOROSCOPUS, who is particularly instructed in Hermes, his Astrological books, which are four.* Then succeeds the Hierogrammateus, or sacred scribe, with feathers upon his head, and a book and rule in his hands, to whom it belongeth to be thoroughly acquainted with the Hieroglyphics, as with Cosmography, Geography, *the order of the Sun, and Moon and five planets,* the chorography of Egypt, description of the Nile, etc.

We see from all of this that with the Egyptians astrology and religion went hand in hand, as did astrology with their other sciences.

On this matter of religious processions I should like to quote also from Doctor Anna Kingsford and Edward Maitland in their English translation of *The Virgin of the World of Hermes Mercurius Trismegistus:*

> The Sacred Books of Hermes, says Mrs. Child in her admirable Compendium (*The Progress of Religious Ideas*), containing the laws, sciences, and theology of Egypt, were declared by the priests to have been composed during the reign of the gods, preceding that of their first king, Menes. Allusions on monuments prove their great antiquity. *There were four of them,* and the sub-divisions of the whole make forty-two volumes. Their numbers correspond exactly to those of the Vedas, which the Puranas say were carried into Egypt by the Yadavas at the first emigration to that country from Hindustan. The subjects treated in them were likewise similar; but how far the Books of Hermes were copied from the Vedas remains doubtful. They were deposited in the inmost holy recesses of the temples, and none but the higher order of priests were allowed to read them. They were carried reverently in all great religious processions. The chief priests carried ten volumes relating to the emanations of the gods, the formation of the world, the divine annunciation of laws and rules for the priesthood.
>
> *The prophets carried four, treating of astronomy and astrology.* The leader of the sacred musicians carried two, containing hymns to the gods, and maxims to guide the conduct of the king, which the chanter was required to know by heart. Such were the reputed antiquity and sanctity of these Egyptian hymns that Plato says they were ascribed to Isis, and believed to be ten thousand years old.
>
> Servitors of the temple carried ten volumes more, containing forms of prayer and rules for offerings, festivals and processions.
>
> The other volumes treated of philosophy and the sciences, including anatomy and medicine.
>
> The books were very famous, and later were much sought after for alchemical purposes, especially for that of making gold. The Roman Emperor Severus collected all writings on the Mysteries and buried them in the tomb of Alexander the Great; Diocletian destroyed all the books on Alchemy that he could find, lest Egypt should become too rich to remain tributary to Rome. The once-renowned books of Hermes have been lost these fifteen hundred years.

The Fragments comprised in this reprint have been the subject of much learned research. In the early centuries of Christianity Dr. Louis Ménard tells us (in his *Traduction Complète de Hermes Trismegistus* 1867), they enjoyed a high repute as of undoubted genuineness, the Fathers invoking their testimony on behalf of the Christian mysteries, while Lactantius, the Christian Cicero, said of them, "Hermes, I know not how, has discovered well nigh the whole truth." He (Hermes) was regarded as an inspired revealer, and the writings which bore his name passed for genuine monuments of that Egyptian theology in which Moses had been instructed. And this opinion was accepted by Marsilio Ficino, Patricius, and other learned men of the Renaissance, who regarded them as the source of the Orphic initiations and the philosophy of Pythagoras and Plato.

Doubts, however, arose. They were ascribed variously on the strength of internal evidence to a Jew, a Christian, and a Gnostic. And the conclusion come to by recent critics and accepted by Dr. Ménard, is that their place is among the latest productions of Greek philosophy, but that amid the Alexandrine ideas, on which they were based, there are some traces of the religious doctrine of Ancient Egypt. It was, he says, from the conjunction of the religious ideas of Egypt with the philosophical doctrines of Greece, that the Egyptian philosophy sprang, which has left no other memorial than the books of Hermes, in which are recognized, under an abstract form, the ideas and tendencies which had before been presented under a mythological form.

Chapter 3

ASTROLOGY AMONG THE GREEKS

Every event in the heavens has its meaning as part of the eternal scheme of divine forethought.

Diodorus

Who can say when Homer was born? Authorities place his birthday any time between 1184 B.C. and 635 B.C., a divergence of five hundred years, but the consensus of opinion is towards the earlier date. What had he to do with astrology? To my mind he is the planets' own dramatist. The question propounded is:

Greeks or Trojans, who will win the war?

or, What is the will of the gods concerning the great struggle brought about by the love of Paris for Helen?

Homer himself asks the question:

"Say then what Gods the fatal strife provoked?" and answers:

"Jove and Latona's son."

In other words it was Jupiter, and Apollo the Sun god.

On the side of the Trojans are Apollo, Venus and Mars.

On the side of the Greeks are Neptune, the Moon, Vulcan, Pallas, and last but not least, Saturn's son, Jupiter himself, the god of judgment.

Mercury is never mentioned by Homer, but Iris, the rainbow goddess, is the female counterpart of Mercury. She acts with strict neutrality towards both belligerents, being Jupiter's own messenger to Greeks and Trojans alike.

Certain of these gods and goddesses are not assigned to the horoscope by modern astrologers, but Manilius, the ancient Roman astrologer, gives us clues to their zodiacal assignment, which he says are taken from the old fables. He calls them, not rulers, but Guardians of the signs. According to him:

Neptune is the Guardian of Pisces.
Pallas (or Minerva) is the Guardian of Aries.
Vulcan is the Guardian of Libra.

You may say that the planet Neptune had not been discovered in those days, nevertheless his influence was said, in the old fables, to affect Pisces, and everything that Homer has to say of him is in perfect harmony with the "wily Neptune" of present-day astrology. Pallas, bright as the dawn of a new day, sprang all armed from the head of Jove, hence she represents the intuition, foresight, wisdom and attack inherent in Aries, which brings success in battle. Vulcan is the smith of the gods. His anvil has taken the place of the Western altar of sacrifice of the Babylonians.

Jupiter will finally give victory to the Greeks, but being at heart a kindly god with considerable love for the Trojan cause, and also a wise god who demands that justice shall be maintained even among the quarrelling Greeks, he apparently turns renegade at the beginning of the story, because he has been entreated by Thetis to give Achilles time to regain his lawful slave Briseis. Jupiter promises that until this time comes, Troy shall not fall.

In the far off days when Homer sang his Iliad, his audience believed that the world was animate and that the virtues and vices of various gods entered the souls of all creatures and things. That is why in all that Homer's Greeks and Trojans do, there is a heavenly god or goddess watching and guiding. If Achilles should start to draw his sword on Agamemnon at the council meeting, then Pallas comes and pulls him by his golden hair, and as he recognizes the wisdom that Pallas unites with her courage,—and would have him display too,—he chokes down his anger a little, sheathes his sword and merely taunts the mighty Agamemnon with words. Always the heavenly instigation, or heavenly influence of the planetary gods, is present. Every scene on earth is a reflex, outcome, or willed event of some previous scene in the heavens. We moderns say action is the result of psychological reflexes, but are we any nearer to the cause of action? And surely, in our modern psychology, drama and poetry are thrown out of doors, and—for this reason epic poetry is apparently a thing of the past.

Plutarch, who lived in the first century A.D., tells us that Hesiod, the Greek poet who lived eight centuries before Christ, was an expert astrologer, and Plutarch's testimony is not lightly to be set aside, for he had studied under Ammonius, the chief teacher in the school originally founded by Aristarchus, one of the astronomers of Greece.

The plays of Aeschylus (525-546 B.C.) may be looked upon as dramatic considerations as to whether man can escape his destiny or not. He does not employ astrological terms, but makes use of astrological philosophy. He comes to somewhat the same conclusion that Dante arrived at in mediaeval times, that man has to co-operate lovingly with the will of the Supreme God, rather than try to pit his will against what has been planned,—all of which makes us realize that the ancients, as well as Dante, believed that there was a plan,—a plan which even took account of the details of the lives of human beings.

Sophocles (496-405 B.C.) sounds much the same theme but he is more realistic and makes his heroes and heroines act more like modern people than did Aeschylus.

Euripides (480-406 B.C.) does give us one astrological reference. He tells us that Hippo, daughter of Chiron, predicted the future from the rising of the stars.

Philostratus, who lived in the third century after Christ, tells us that astrology was known and practised in Greece as early as 1184 B.C.

Pliny, who lived in the first century after Christ, tells us that Anaximander, Anaxagoras, Hippocrates and Hipparchus were all good astrologers. Let us not place too much confidence in this until we turn to these men's works. We should remember too that the seaports of Egypt were thrown open to the Greeks in 640 B.C., and with the opening of these ports the knowledge of Egypt could come to Greece.

Thales (born 640 B.C.) is said to have introduced Egyptian astronomy into Greece. He taught that the earth is a sphere, as did also most of the Greek scientists. Whether his sphere had an axis I do not know, but I have read that it was Aristotle who "threw out the axis," and that afterwards some astronomers followed the teachings of Aristotle, and some kept the axis, and this was so until the time of Augustus Caesar, for Manilius in that period still wrote about an axis, but by the time of Claudius Ptolemy, the Aristotelians had won, for Ptolemy has a spherical earth without an axis. Thales also determined the ratio of the Sun's diameter to its apparent orbit. But he could prophesy too. Seneca tells us that Thales grew rich because he foresaw that the olive crop would fail one year, but be good the following year, so during the depression he bought up all the olive presses, then waited a season until he, and he alone, had the olive presses with which to make oil. Since scientists today cannot predict olive crops two years ahead, I presume he did it astrologically. Thales, so says Herodotus, prophesied the total eclipse of the Sun of 609 B.C., and said it would herald the end of the war between the Medes and Lydians. The eclipse occurred when the battle between these two nations was at its height, and darkness falling on both armies, the war ceased.

Anaximander (born 611 B.C.) was a disciple and friend of Thales. He is credited with bringing to Greece spherical models of the earth, and sundials, together with various instruments for making celestial calculations. Is there any record of Anaximander making prophecies? Yes, he foretold the earthquake which overthrew Lacedaemon. Since scientists today cannot foretell earthquakes, I presume he did it astrologically.

There is much doubt among scholars as to the time when Cleostratus was born. He may have flourished any time between 648 B.C. (that is, before Thales was born) and 432 B.C. Censorius says he was the real inventor of the eight-year cycle used before the Metonic Cycle of nineteen years was found. He was a meteorological astrologer. Pliny gives him credit for being the first who divided the zodiac into signs beginning with Aries. On the other hand, various scholars say the zodiac was introduced into Greece by Oinopedes of Chios, a contemporary of Anaxagoras. Needless to say, Cleostratus was much too late in time to be the first to invent the zodiacal signs, and Oinopedes was too late to be the person who introduced them. There is further disagreement on this matter from authorities who say that Manetho, an Egyptian priest who lived in the time of Ptolemy Lagus (323-285 B.C.), must receive credit for introducing the zodiac and astrology into Greece. He wrote an astrological poem in six parts, entitled *Apotelesmatics,* in which he not only mentioned the zodiac, but gave astrological meanings to the signs and planets. Other authorities place the date of this poem in the first century before Christ. With so many authorities disagreeing would it not be just as simple to say that the origin of astrology in Greece lies so far back that it cannot be known? In any case, Manetho did not invent astrology. Suidas refers to this poem. Manetho was the first Egyptian to write in the Greek language a real history of Egypt in which he included a study of their religious and philosophical doctrines. The book has been lost but Josephus quotes from it.

Apollonius of Myndos, who lived in the time of Alexander the Great, was particularly skilful in reading horoscopes. He told everyone that he learned his art from the Chaldeans. Seneca mentions this astrologer's work on comets, so that his astronomical work was evidently important too.

Plato (born 427 B.C.) mentions astrology in his *Timæus.* He advised all military men to study it because it would be invaluable to them even for its accuracy in weather forecasting. Theophrastus, who was first attached to Plato and then to Aristotle, goes even further. He advises men to study the wonderful art of astrology because it not only reveals general events, but the specific details of particular lives. This statement alone should tell us that the predictions of the time were not confined to the weather. Eudemos of Rhodes, a disciple of Aristotle, wrote an astrological history which is recorded, but which is not now extant. If an astrological history was written at that time, surely there must have been a history to record.

Eudoxus was born about 336 B.C. He studied in Egypt and wrote on Concentric Spheres. Apparently he knew astrology. His findings were incorporated in the poems of Aratus (born about 270 B.C.). Aratus wrote two poems, or rather one poem in two parts, one called *Phenomena,* giving the constellations and the fixed stars, the other entitled *Prognostica.* If this *Prognostica* is largely weather prediction, may I point out that the same principles are used in weather predicting as are used in genethliacal astrology, as any modern astrological textbook on weather prediction will show. Hipparchus (160-125 B.C.) is said to have written a Commentary on this poem. Aratus lived most of his life at the court of the King of Macedonia. The beginning of his *Phenomena* contains a passage referred to by St. Paul, a fellow countryman of Aratus, in his speech to the Athenians, *Acts* xvii: 23, where St. Paul declares that he had seen an altar dedicated to THE UNKNOWN GOD.

In speaking of Aratus I cannot forbear mentioning some comments made on his work by R. A. Proctor, who said that Grotius erred in asserting that the phenomena of Aratus can be assigned to no fixed epoch and to no fixed place. Proctor said that, with the exception of a few which Aratus inserted from his own unskilled hand, all the phenomena could be found, when due correction was made for the effects of precession, to correspond very satisfactorily with a latitude of between 38 degrees and 41 degrees north, about 4,000 years ago. In his book *Eridanus,*[1] Robert Brown, F.S.A., refers to Proctor's investigation, and in turn comments on the work of Aratus saying:

"And this circumstance affords the most positive proof, not merely of the high antiquity of comparatively developed astronomical observation, but also of the significant fact that the present constellational arrangement of the heavens is *not Hellenic in origin.*"

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[1] *Eridanus,* by R. Brown (Longmans, Green & Co., 1888).

In another part of *Eridanus,* Brown goes on to say:

"Aratus states that Ara [the constellation] is to be seen above the horizon for as many hours as Arcturus remains below the horizon. This arrangement has not been fulfilled since some 3,600 years ago, when the star Arcturus was 50 degrees from the North Pole, and the middle of Ara was 50 degrees from the South Pole. If, as is probable, the whole of Ara is meant [by Aratus] then the epoch must be placed four centuries earlier than that."

In other words, observations had been going on since about 4000 B.C. Since, as we saw previously, it was no new thing even at that early date to connect the phenomena of the heavens with the events of mankind, then if the early Greeks knew nothing of this connection, we are left wondering when the divorce took place. Was it not more likely that the connection between the two was so firmly established in the minds of all astronomers, that when Chaldean astronomy came to Greece, the astrological concepts came along too,—and astrology never ceased? Brown goes on to state that since Proctor is sure that the latitude of observation was between 38 and 41 degrees north, we might go on to infer that, since Cairo is only 30 degrees north, *Eudoxus did not derive his material from Egypt,* where he is said to have studied.

Hippocrates, the physician, who lived 460-357 B.C., made his students learn astrology in order to know "Critical Days," from which we must deduce that astrology was known and practised in his time, that is, in the fourth and fifth centuries before Christ. This phrase "Critical Days" crops up in nearly all the medical textbooks of succeeding centuries,—in all the Roman, Spanish, Jewish and European textbooks on medicine. It crops up in Galen and it crops up in Jerome Cardan. In fact the phrase was still in use in the seventeenth century.

There is no way a physician can find Critical Days in the sense understood by Hippocrates unless he can erect a chart of his patient and a chart of the time when he is called to the case. Hippocrates was so sure of his judgment concerning Critical Days that he made the statement, "The man who does not understand astrology, is to be called fool rather than physician." We ask if Hippocrates could predict? Yes, he foretold a great plague, and he sent his medical students out to many cities to be ready to combat it. And he and his students conquered the plague so rapidly and saved so many lives that the state of Greece decreed Hippocrates to be a god, and commanded that the sacrifices of Hercules should be awarded to him.

Hippocrates was born on the Island of Cos, and at the Temple of Aesculapius there, a medical school had been founded at a very remote period. *It was to this school already in existence, and famous, that Berosus, the Babylonian priest, thought it worth his while to come and teach* some of the astronomical-astrological lore which he obtained from Bel's Temple. He did not even found the school there. He flourished about 261-246 B.C., and is usually credited with having invented (or having introduced) the semicircular sundial. Among the books he wrote was one on astrology called *Chaldaika*. Neither this nor anything else he wrote is extant, but some of his material has been quoted by Josephus and the early fathers of the Church. He made a great reputation for himself and was considered to be a benefactor in bringing to Greece the knowledge contained in the *Illuminations of Bel*. Pliny mentions that the city of Athens showed him honor by making a statue to him, and this statue had a golden tongue symbolizing their respect for his skill in oratory. His successors at Cos, Antipater and Achinapolus, taught medical astrology and they investigated Pre-natal Astrology, that is, the chart of conception rather than the birth-chart. That pre-natal astrology was ancient, we know from the aphorism which is called the Trutine of Hermes, ascribed to the mythical Hermes and inserted in Ptolemy's *Centiloquy*, in these words:

> Make the sign occupied by the Moon at the time of birth the sign ascending at the time of conception: and consider that in which she may be posited at the conception (or opposite one) as the sign ascending at birth.

In other words, there is a reciprocal connection between the Ascendant and the Moon in prenatal and natal charts. The matter has been revived in the last century and much research has been done by Sepharial and E. H. Bailey. I am inclined to think that prenatal astrology was one phase of the subject that was brought to Greece from Babylon.

Pherecydes of Syros, flourishing 540 B.C., was the teacher of Pythagoras. We are told that he learned all he knew from the secret books of the Phoenicians, showing that the secret lore of many nations was impinging on Greece long before Berosus came to Cos. Pherecydes too is said to have been well acquainted with the Kabbala of the Jews, which some people say is Babylonian in origin. He maintained a philosophy which was based on astrological concepts, that there were four elements, earth, air, fire and water, and that there were three principles working throughout the universe:

Zeus ruled the ether, and fire. (Jupiter).
Chthona ruled chaos, and earth. (Moon).
Cronus ruled time. (Saturn).

So that as early as the sixth century before Christ there was knowledge of what astrologers call the triplicities[2] and the quaternaries, or the threefold division of the 12 signs into four elements, and the fourfold division of the 12 signs into three quadruplicities containing the cardinal, fixed and mutable signs. The fixed signs would be those of Cronus (Saturn), which planet ruled time. The cardinal signs would be those of Chthona, who ruled chaos, for cardinal signs are the starters of all action; and the mutable signs would be under Zeus (Jupiter), who ruled thought, which is astrologically mutable.

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[2] *See* Introduction.

Very little is known concerning Pythagoras, born about 580 B.C., as his books are not extant, but Lobeck in his book *Aglaphaom* shows how Pythagoreanism became more and more connected with astrological ideas. One might say that practically all the later Pythagoreans were astrologers, just as one might say the same of the Stoics. And many Pythagoreans and many Stoics knew that the earth had an axis and that the earth revolved around its axis. We shall consider this when we come to the Roman, Manilius.

The second century before Christ was the period when the Roman Empire began to hold sway over Greece. From 194-168 B.C. the Romans were pursuing their conquests, and in 146 B.C. the capture and destruction of Corinth marked the complete conquest. From this time on, Greek astrology influenced Roman methods of prediction.

Among the Stoic philosophers was Antipater, who flourished about 144 B.C. He was the disciple and friend of Diogenes. He wrote two books on Divination proving that divination was possible since the Deity himself had foreknowledge and in his benevolence would wish men to be able to meet the future with knowledge rather than with ignorance. Antipater collected all the stories he could concerning the prophecies made by Socrates. Cicero refers to him in his *De Divinatione,* and gives Antipater credit for very remarkable acuteness. Plutarch also mentions Antipater as ranking with Zeno, Cleanthes, and Chrysippus among the great Stoic philosophers.

Going back to the poem of Aratus, Geminus of Rhodes, about 77 B.C., appears to have delved into this, and wrote an Introduction to it. Proclus speaks of Geminus, saying that he divided the mathematical sciences into two parts. The first half held arithmetic and geometry. The second half held astronomy, astrology, mechanics, optics, geodesy. Apparently Proclus' *Book of the Sphere* is an abridgment of that of Geminus. Geminus is credited with having disproved that the rising and the setting of the stars had anything to do with the weather. What he really said was that an astronomer is not necessarily at fault if his weather predictions do not come true, as they represent average states of weather founded on past experience, but he says if an astronomer makes a mistake in setting the time for an eclipse or for the rising of a star, then he is really to blame. He remarks that a star is a sign of certain weather and not its cause, just as a beacon is a signal of war and not its cause. People think, he says, that Sirius produces the heat of the dog days, whereas Sirius merely marks the season when the Sun's heat is greatest. Many astrologers have used the same arguments concerning genethliacal astrology, for whereas some say that the planets influence us, others use the phrase "As above, so below" to mean that the positions of the planets at the time of birth merely indicate the play of various forces which are at work at that moment, so that the child born then is a part of the cosmic forces of the moment rather than a result of them.

Before I close this chapter I should like to point out that Sir George Cornewall Lewis in his *Astronomy of the Ancients,*[3] actually puts the blame of systematizing astrology on the Greeks. In this he is diametrically opposed to modern writers who are trying to prove that the Greeks did not know any Judicial Astrology, but merely predicted weather. It is just another case where doctors disagree. Lewis insists that only persons of more than average intelligence could have invented astrology because it is so highly technical. I should infer from this that he was not accusing the lesser lights among the Greeks of being responsible for genethliacal astrology, but rather the great Greeks. Let us read what Lewis said:

> Astrology, as practised in the first centuries of the Roman Empire, was an intricate and abstruse art. Its professors were known as Mathematicii. It involves more reasoning, and demanded more constructive ingenuity than the modern pseudo-sciences of Phrenology and Homoeopathy. Even for his own objects of superstitious imposture, a Chaldean

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[3] Geo. C. Lewis, *Astronomy of the Ancients* (London, 1862).

> or an Egyptian, would have been unable, without the assistance of a higher intelligence, to produce so refined an instrument as genethliacal astrology. It required the gifts of the Greeks to give it the precision and finish, and false lustre of a scientific method, which it obtained at their hands. . . . At a later time the Arabians received it from the Greeks, but simply handed it down to posterity, without either exposing the fraud, or adding to its ingenuity.

I note that Lewis wrote in 1862, when scientists considered homoeopathy to be a pseudo-science, so possibly there is still hope that the same label may be taken off astrology. I think the belittlement of the Chaldeans and Egyptians to be undeserved in the light of modern research on these two nations. Lewis lived in that Victorian school when no nation but the Greeks was supposed to have had any intelligence whatsoever, so when in spite of his unmitigated hatred of astrology, he has to compliment the Greeks on "refining" the terrible pseudo-science of astrology, I presume he did not do it without proofs.

Chapter 4

THE WAR OF THE ELEMENTS

The names of the gods are not titles of deceiving demons,
but the designations of divine virtues.
Pico della Mirandola

A book on the History of Astrology would be incomplete if we omitted reference to one of the most fundamental of Greek questions:—What is the original substance out of which the world has been made?

The early philosophers of Greece, who in my opinion were also astrologers, strove mightily to find the basic element out of which the earth was made. Was it Earth, Air, Fire or Water? It is an eternal argument which goes on even today, for astrologers still use these four elements in the process of delineation, though they know that none of these are actually elements.

Homer stated that Water or the Ocean was the original element out of which all life came,—and many modern scientists have much in common with his theory. The same idea was apparently indigenous with the Egyptians, Babylonians, Assyrians, etc., for the sign Capricorn is represented by these nations as a goat with a fish tail. Now Capricorn is the builder, hence the symbol of the goat-fish expresses the thought that the evolution of all forms proceeds originally from that which is contained in the ocean of waters.

Homer was, of course, a poet, and though poets say things well in advance of their times, they are rarely believed until some person called a scientist comes along and says the same thing in different language, and tries to prove the theory. In ancient Greece people apparently accepted Homer's statement as good poetry until Thales, sometimes called the Father of Greek Science and Philosophy, declared with all kinds of proofs that Water was the original element, and that like Water, "All things Flow." He said that Water had within itself the indwelling power of the gods, and because this was so, Water could produce the universe and all that was in it and upon it. Thales was quite a metaphysician in his way. He said that "Out of nothing, nothing comes," hence he inferred that the original waters of the world contained not only the gods but all things on the earth too. He was careful to say that the material water you drank or washed yourself in did not actually do the creating, but the "soul of Water," being godlike, did create. Thales believed in the doctrine of an indwelling soul or god in nature. This was denied in many succeeding philosophies, but developed in others. In modern days we call this theory of God in Nature, Pantheism. The great poet to expound this philosophy was Shelley. Note his lines on the dead Keats:

He is a portion of the loveliness
Which once he made more lovely . . .

Thales had a disciple named Anaximander, who only half believed what his teacher told him. On reflection, he felt that somehow or other Air also was necessary to the makeup of the world, so he introduced a scientific and philosophical theory of a First Cause which was composed of both Water and Air. In his teaching he appears to think this Water-Air is one and not two elements, for he calls it the "Indeterminate First Principle" of the universe. Thales had read Homer and he had used Homer's ideas, but Anaximander had read Hesiod, and was inclined to absorb Hesiod's ideas, for Hesiod had thought that the world was originally all Chaos (not Water) and Chaos was not full of the gods, so Anaximander said this Water-Air First Principle was not spiritual and it was not intelligent. Somehow heat and cold affected it, and so consequently heat and cold must have been the things which originally set the universe in order. However, Anaximander's First Principle was a "something." It contained everything in the universe.

Anaximander had a disciple named Anaximenes who was just as materialistic as his master. He also only half believed his teacher, but instead of adding an element, he cut off the Water, and said that Air, and Air alone, was the original First Cause. Air was the single indivisible element. The Earth itself was merely compressed Air, and the souls of people were merely compressed Air. Unlike Anaximander, however, he said that it was not heat and it was not cold that did the compressing, but it was Motion. We might compare his theory of Motion with the theory of Henri Bergson, who stated that "Life is Effort."

As years went on, all these theories of Thales, Anaximander and Anaximenes were thrown into the discard. Heraclitus and Empedocles came along and said that neither Water nor Air could be considered the original First Cause, for the simple reason that Fire was the original element and First Cause. Without doubt both Heraclitus and Empedocles had read Hesiod, and they knew that Hesiod thought the world was originally Chaos, but they read a little deeper into the meaning of the term "Chaos" than did Anaximander, for they found that it was little Eros who worked on Chaos and changed Chaos into an orderly world. For real scientists to come out openly and say "Love did it" would look foolish, so since Love can be symbolically represented (and still is, in astrology) by the element Fire, both Heraclitus and Empedocles said that Fire was the First Principle and Fire had created everything. They followed Thales in saying that "Everything flows," but they said it flows from Fire to Fire, and continually improves as it flows. They would have been in almost total agreement with Emile Coué in his statement, "Every day in every way I am getting better and better."

Now, as far as can be gathered from history, no great philosopher-scientist of old ever said that the world was made of Earth. (A possible exception is Xenophanes, who included Earth with Water.) That would have been too obvious, but a little before the time of the Fire philosopher-scientists, Pythagoras taught that the world wasn't made of any known element, for the First Cause was in Number. Evidently there were terrific battles in every Greek city in those days over the First Cause. Pythagoras and his followers laughed at the idea of anything physical being a First Cause. The First Cause, they said, must be in the Ideational World. The idea of Number is the original element, and God is the original unity or Number One. Pythagoras did not explain how Number materialized, and how it got out of the Ideational World into the material world. He was too abstruse for a scientific world which had not as yet discovered electrons. This was probably the reason why he had to be succeeded by the Fire philosophers.

However, Pythagoras evidently set the stage for other metaphysical concepts of later scientists. Anaxagoras came to the fore saying all over again, "Out of nothing, nothing comes," hence matter must have existed from all eternity. He said that, at first, matter was all disarranged and in a state of Chaos, but that "Nous," or Mind, or Intelligence came and arranged it in orderly fashion. Note here that the Nous, or Mind, did not of itself do the creating; it merely arranged and set things in order. Even in human beings, said Anaxagoras, if put in control, it can arrange lives more sensibly. It can keep the senses in control and it can help men live more useful lives. We might compare this teaching with that of Schopenhauer, who believed that Will and Idea are the main essences of life. Later developments can be found in the teachings of Mary Baker Eddy and of present-day New Thought.

Next we come to Leucippus and Democritus, who believed that the First Cause was Necessity. They looked on the world as a machine, but neither Leucippus nor Democritus discovered how Necessity set the machine to work! However, Leucippus at least was sure there was no original design or pattern in the making of the world. It happened the way it did through Chance and Necessity. Both scientists talked of Chance, but they defined Chance as (in our opinion) not Chance at all, but something that went its own way because there was Necessity governing it. These two scientists were apparently the forerunners of modern agnosticism and determinism. Aristotle was one of the foremost antagonists of these two men, especially of Democritus. Aristotle followed the Babylonians and Egyptians in their astrological concept of four elements, Fire, Earth, Air and Water.

Before we proceed any further with this War of the Elements let me state that the astrologer divides the twelve signs of the zodiac into four groups of three signs each, as follows:

Fire signs: Aries, Leo, Sagittarius. These indicate Spirit or life, the urge of life, driving power, zeal and enthusiasm.
Earth signs: Taurus, Virgo, Capricorn. These indicate body, material, practicality or doing.
Air signs: Gemini, Libra, Aquarius. These indicate mind, thought and awareness of things.
Water signs: Cancer, Scorpio, Pisces. These indicate soul qualities, emotion and feeling.

Since astrology was originally a religious subject, we realize that the four elements were considered as the four manifested qualities of God in man: Spirit, Soul, Mind and Body.

Now the twelve signs of the zodiac are also divided by astrology into three groups of four signs, as follows:

Cardinal signs: Aries, Cancer, Libra, Capricorn: Signs that act, or whose essential quality is action and doing.
Fixed signs: Taurus, Leo, Scorpio, Aquarius: Signs whose essential quality is that of the will.
Mutable signs: Gemini, Virgo, Sagittarius, Pisces: Signs of thought, adaptability, and the ability to mix with others, wisdom.

I might mention that, since astrology was originally a religious subject, these three groups can be referred to as the three expressions of the divine nature: will, wisdom and activity.

Having taught Astrology for over twenty years I can safely say that no subject in the world arouses the interest of the student as quickly, first in itself, and then in all the allied matters concerning free will, fate, the First Cause, etc. Discussions are frequent, such as those among the Greeks, as to which was the First Element. The argument usually centers on Fire versus Air. As a rule I let students battle the matter out until they discover that whether they realized it before or not, they have some basic convictions. Then I tell them it is part of one of the oldest wars in the world. I can follow this up by reading to them parts of the *Sephir Yetzireh,* which gives in detail the assignments of the elements, or I can quote them some of the statements that have been made by thinkers in past ages, from Ezekiel to Plato and Aristotle and down to modern times. (I might refer the reader back to the section on Egypt where the four sons of Horus are mentioned.) In the first chapter of *Ezekiel* we have his vision of God, with a whirlwind, a cloud, a fire infolding itself, and a brightness. . . . "And out of the midst thereof came the likeness of four living creatures. And this was their appearance: They four had the likeness of a man . . . they four had the face of a man, and the face of a lion, and they four had the face of an ox on the left side; they four also had the face of an eagle."

Here we have the four fixed signs in symbol:

Likeness of a man	the sign Aquarius, the waterman.
Likeness of a lion	the sign Leo, the lion.
Likeness of an ox	the sign Taurus, the bull.
Likeness of an eagle	the sign Scorpio, scorpion (sometimes portrayed alternately as an eagle).

Later, when we come to the early Christian period we find in Church decoration and in religious manuscripts that the four gospellers have the symbols of the four fixed signs of the zodiac, *e.g.*:

Matthew has the emblem of angel, or man-faced being	Aquarius
Mark has the symbol of the lion	Leo
Luke has the emblem of the ox	Taurus
John has the emblem of the eagle	Scorpio

I might also mention Philo, who flourished about 20 B.C. He is said to have been an Alexandrine Jew, who went to Rome with various other Jews in 39–40 A.D. in order to have a statute revoked which required that divine honors be paid to the statue of the Emperor. Philo believed that the world was fashioned of four primal elements: earth, air, fire and water, but that since the Spirit of God was the fashioner of all things, the Spirit of God had acted upon these elements in order to form the world. He was a sincere student of Plato, and followed both Plato and Aristotle in believing that "the souls of men are equal in number to the stars."

Isaac ben Solomon Israeli, sometimes called Isaac Judaeus, the learned teacher of astrology and medicine in Kairwan University in the later seventh century A.D., spoke of the four fixed signs, saying that "Nothing precedes the four elements but the omnipotence of God." He maintained that the four elements were generated in the motion of the sphere. Possibly by this he meant in the Primum Mobile, which was the evidence of God's activity in the world. He said too that souls originate from the Prime Intelligence, and are part of it.

Moses Maimonides, born 1135 A.D., also busied himself with discussion on the interpretation of the four elements, and so did most of the thinkers of his period and of later periods.

Although Jacob Boehme is considered to be "obscure" the material in his *Signature of All Things* becomes much clearer when studied in the light of astrological thought. He tells us there are said to be four elements in the world, but he is convinced that actually this is not so, for there is but one original element, and *this one separates out into four properties:*

(1) The property of Fire.
(2) The property of Earth.
(3) The property of Air.
(4) The property of Water.

Boehme uses the phraseology of the alchemists of his day. He calls the original element Sul-Phur, that is, the Fire of God, as differentiated from the Fire of the Sun of this material world. Sul-Phur is the original Light and the original Liberty. It is Spirit unmanifest, but preparing to manifest.

Sul-Phur manifests first in four properties and then in seven. The first four are the properties of the Sun, Saturn, Mars and Venus. The four work together after manifestation and they work simultaneously. They are inseparable in this manifested world of ours, yet in studying them we have to take them in sequence. Note that these four planets are the rulers of the four fixed signs:

The Sun ruling Leo gives life.

Saturn ruling Aquarius gives the original pattern-making qualities, innate in all substances and in all living creatures. In this planet is a will to subsist as is; for example, Boehme states that the will to be a cat and continue as a cat manifests in the cat species.

Mars ruling Scorpio gives the desire and the will to manifest at all.

Venus ruling Taurus gives the blood and the material of both soul and body (the former in very rarefied form), but Venus does not give life.

From Jacob Boehme we might go on to Spinoza, who says there is one original substance which is independent of all others, and which determines itself and its expression. This one substance is God. The world is merely appearances or forms of God. God is the First Cause, and God is the universe too. Will and liberty belong to God and not to man.

In my classes, when arguments concerning free will versus destiny come up, I always tell my students that, whatever they think of the matter, they will go through life more easily and make better people if they act in all matters as though they do have some free will, for many times in the past when human reason has apparently been able to "prove" that a thing was thus and so, it has later been found that the "proofs" were immature: for example, iron was once supposed to be an unsuitable material with which to build ships because it sinks in water, but later, by applying the ancient Principle of Archimedes, we now have iron ships. Also I refer them to Emerson's Essay on Fate, wherein Emerson says if you fear you may drown—learn to swim. I find that my really sincere students use their astrology as a means of analyzing all aspects, good or bad, in order that they may understand how to act for the best under a specific array of forces, and not in any fatalistic way. Far from being fatalistic, astrology shows the factors at work and how best to cope with them. Every day is not sunshine, but just as we have learned how to offset this by means of artificial light, so, mentally speaking, we can use the qualities, denoted by specific planets in the zodiac as cheerful ones, to offset the gloom of the mind.

Chapter 5

THE SCHOOL OF ALEXANDRIA

Zodiacal arrangement of the stars has been held by the Babylonians, Persians, Egyptians and Hebrews to be nearly coeval with the origin of man himself. . . . Most of the modern writers upon astronomy, as Montucle, Cassini, Bailly, Laplace and Smythe, give their support to the above conclusion.

Catalogue of the Zodiacs, 1320 B. C.–1900 A. D.
A. B. Grimaldi, *Caius College, Cambridge.*

In every age there is always one group of men who are interested in the advancement of learning and its consolidation in academies, museums and libraries. They collect and gather until the world looks on the effect with admiration.

Then a war lord is born and everything is dispersed or burned. The City of Alexandria was founded by Alexander the Great, who as a student of Aristotle, was interested in learning, though hardly a great student himself. His father Philip of Macedon had conquered Greece, 338 B.C., but Alexander set out to conquer Persia, the Near East and even India. In order to break the sea power of the Persians he conquered Egypt and Libya, and at Alexandria he built a new city. For this he needed inhabitants. He could hardly spare enough Greeks, so he allowed Jews from Palestine to settle, and also various other groups of people. To this new city many scholars from all parts gradually came, to see if they might have some opportunity of pursuing their studies away from war zones, and as they commingled with one another their own scientific and philosophical views were broadened.

After Alexander's death the King of Egypt, Ptolemy Soter, sometimes called Ptolemy I (323 B.C.–285 B.C.), was so impressed with the large number of scholars and the desire that these had to know more, that he thought an opportune moment had come to found a Museum, which today we would call university rather than museum. The word museum means a place for the muses, and the Muses were nine in number, presiding over the known arts and sciences of the period: Clio over history, Euterpe over lyric poetry, Thalia over comedy, Melpomene over tragedy, Terpsichore over choral dance and song, Erato over love songs, Polyhymnia over sublime hymns, Calliope over epic poetry and Urania over astronomy and astrology. In this grouping we note only one division that could be called scientific,—the one devoted to Urania. The School of Alexandria produced the most famous of all devotees of Urania,—Claudius Ptolemy. But Ptolemy and his work did not grow up overnight. It was nearly four hundred years after the founding of the school before the time was ripe for Ptolemy to write—perhaps we might say to collect—all the work that had been done by the scientific men before him. Ptolemy Soter unconsciously determined the early spirit of the Alexandrine School when he looked for a good mathematician and astronomer and found Euclid, whom he appointed to the chair of Geometry. There Euclid settled and worked his students so hard that evidently they complained to Ptolemy, who finally asked him if geometry could not be made easier to study, whereat came the famous reply, "There is no royal road to learning." The best account of Euclid's life was written by Proclus, a later teacher of Alexandria. Proclus tells us the source of some of Euclid's problems, also which ones he invented and which ones he did not. That Euclid was interested in astronomy we must realize when we know that he too, like Aratus, wrote a book called *The Phenomena*. Whether he was interested in much besides weather predictions we do not know but these were based on interpretations of signs and positions of planets, particularly in the fourth House and on the Ascendant, thus necessitating the understanding of horoscopes. It may have been through the scientists of the School of Alexandria that the first systematized methods of progressing horoscopes by Primary directions came into general use, for certainly Ptolemy, astrologer and geometer of the second century, did not invent them. He states that the Mid-heaven is progressed by Right Ascension and the Ascendant by Oblique Ascension. Ptolemy gives much credit to Hipparchus for various observations and work. One of Euclid's most famous pupils was Archimedes, who discovered what we now call the Law of Archimedes, showing that physics also was studied in this School.

With eight muses, however, devoted to more literary studies, we may assume that these eight studies must have been well conducted if the odd muse Urania did so well. One matter which is quite important was that much of the knowledge obtained in various subjects was put into verse, and as verse stays longer in the memory than prose, many a student went to other cities and, without books, was able to repeat all the knowledge that he had absorbed. The Museum became an inspiration to the Near East and to Europe. The second Ptolemy, surnamed Philadelphus (309 B.C.–247 B.C.) believed in his father's work and encouraged it. He felt that both the scientific and philosophical studies would be furthered if only he could obtain all Aristotle's works, so a search was made for these, and by purchase and by gift they were obtained and put in the Library. Because of this fact, and because various other works of famous Greeks were placed among the textbooks for study in the Museum, the Greeks began to look upon Alexandria, rather than Athens, as their center of learning. The third Ptolemy surnamed Euergetes (247 B.C.–222 B.C.) also encouraged the search for all books of value. The works of Aristotle in particular seemed to fit in with what was taught in the astronomical-astrological classes.

If one wonders why people in the early days studied both Aristotle and astrology, it was because Aristotle so definitely insisted that his students and readers find out the purpose or idea in all the separate parts of nature, and this is exactly what an astrologer has to do. For example, the astrologer says that Aquarius rules international movements, also any profession where distribution on a wide scale is the major object. All this is deduced from the fact that Aquarius rules the circulation of the blood (yet this was not supposed to have been known until Harvey demonstrated it). Yet Aquarius was always symbolized as a "stream," either of water, air, or fire. The keynote then, the purpose, or idea underlying Aquarius, is circulation or movement, and as these are involved in distribution or in international movements, the sequence of thought is evident. We astrologers also say that Sagittarius is the sign of foreign affairs. This is so, but not in the sense of mixing, conferring and reciprocity. Sagittarius, since it rules the thighs and upper legs, is connected with the idea of long-distance travel, yet unlike Aquarius, it could be used of travels where there is absolutely no conference, or discussion of ideas, or interchange of goods, or speech. Now, as to the fact that the circulation of the blood was not discovered until the time of Harvey, this may be so, yet the more one studies astrology, the more one realizes that the ancient astrologers may have known many scientific facts that had been lost for vast periods of years but are now rediscovered. Occult tradition and religious tradition verify this. St. Paul said, "For the blood is the life," and he also tells us that the blood in different beings has different qualities, which science in recent years has conceded. "The life in the blood" was a fundamental concept of all early peoples. If they did not actually know that the blood moved, they believed that vital sparks moved in the blood of living persons, for life was motion. Aquarius is assigned in the zodiac to the side of the horoscope opposite to Leo, which rules the heart, and in the horoscope any polarity necessitates action and interaction, hence the "stream" of Aquarius was in some way related to the action of the heart. I have given one single instance here, but all astrology is built up in some such simple way from the study of the function of various parts of the body. It was because of this relationship that Hippocrates and Galen and all the ancient physicians studied astrology. It was all part of the great doctrine of "As above, so below" and also *vice versa.*

Then again we might note that at Alexandria very great hospitality was extended to the Jews; Jewish philosophical and scientific studies commingled with Grecian and also with Egyptian thought. It tended towards heretical doctrines which were not pleasing to the orthodox of any nation. Alexandria in the early centuries became the home of gnostics and Neo-Platonists. Astrology and kabbalism worked hand in hand. There was another factor that led to the disintegration of the School. The Jews always maintained their interest in Palestine, and after the sack of Jerusalem they helped foment rebellions against the Caesars, and persecution against them set in. Learning began to become less important than propaganda. Part of the Library was burnt when Julius Caesar attacked Egypt, but Cleopatra helped to rebuild it by sending volumes from her own library and by grants to purchase new books. So it continued until 390 A.D. when Theophilus, Patriarch of Alexandria, was horrified at what he termed the heretical trend of the various studies. The school was dispersed by order of the Emperor Theodosius, but later it grew up again. Then in the fifth century the Jews in Egypt were overwhelmed by the persecution and massacres organized by Bishop Cyril. For this reason they began to help the Fatimide dynasties to come to power. The final blow came in 640 A.D. when the terrible Caliph Omar came and burnt the great Library to the ground. Very few books escaped at all. If it had rested with Europe to preserve the works of Euclid and Ptolemy, they might both have perished, but fortunately there were some Arabs who valued their work and made translations. Boethius fortunately had translated the first four books of Euclid, and these four were all Europe knew until Adelard of Bath discovered an Arabic copy of the other books, which he translated. I have a feeling that if Ptolemy's *Tetrabiblos* had not survived there would be many more people than there are today, saying that astrology was not taught in the Alexandrine School. After the sack of Alexandria by Omar, until persecution ceased, the men of learning went to Cairo.

Chapter 6

PTOLEMY AND HIS TETRABIBLOS

The mingled influences of the stars can be understood by no one who has not previously acquired knowledge of the combinations and varieties in nature.

PTOLEMY, *Centiloquy.*

IT IS rather a curious fact that though Claudius Ptolemy's books and their translations [1] at various periods, provide the dominant note of the astrological and astronomical history of the succeeding centuries, no one has preserved any account of Ptolemy that is considered reliable. We do not even know when he was born or where. All we know is that he was alive and in Alexandria between 139 and 161 A.D. Evidently he was a somewhat unobtrusive personality who spent his time collecting, preserving and editing all that he thought was valuable, in both astronomy and astrology. He made some calculations himself but at times followed the calculations of Hipparchus (192-120 B.C.) who was the first Greek who dared to number the stars. Numbering the stars, like David numbering his people, was supposed to be irreligious. Besides Hipparchus, Aristotle and Poseidonius all were made use of by Ptolemy. Ptolemy's book *The Great Construction,* commonly called the Almagest after the Arabs had translated it, was divided into thirteen parts. It rests on the theory that the earth is an immovable sphere around which the Sun and Moon and planets revolve, under the eternal guiding motion of the Primum Mobile, the Original Motion or the First Cause.

Ptolemy also wrote a treatise on astrology entitled the *Tetrabiblos,* that is, a book in four parts. Throughout this book Ptolemy repeatedly refers to concepts which he states had been given out by both Egyptian and Chaldean astrologers, hence the *Tetrabiblos* is most probably a compilation under a good editor, of most of the ancient knowledge of astrology. In no place does he claim to say anything original. He treats of the Sun affecting the seasons and the embryos of animals, and of the Moon affecting rivers and tides, and influencing the growth of animals and of plants. He goes on to state what he considers to be the value of prescience to mankind, after which he deals with the zodiacal signs, house divisions of the horoscope, rulers of signs, exaltations, terms, faces and chariots,—the last three of which are rarely used in modern astrology. He gives clues to Mundane Astrology, and tells us what signs he thinks govern the nations of the world. He gives us the effects of planets which are in some position of power in a horoscope. He then proceeds to explain how to read the houses and how to progress the wheel by means of what we now call Primary Directions, but which he calls Prorogations.

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[1] *See* Appendix IV.

Usually printed with his *Tetrabiblos* is his *Centiloquy or One Hundred Aphorisms,* but whether these latter are his or not has been questioned. The main argument against their being his, is that some aphorisms refer to horary astrology and some to elective astrology, which the *Tetrabiblos* does not do. However, practically all astrologers who are interested in judicial astrology have some knowledge of horary astrology and of elective astrology. It depends on whether they can read these charts after they have set them up, as to whether they are willing to call them reliable figures for judgment. My own studies in horary astrology have proved to me that if the question is clear cut and vital,—a matter which is often neglected,—and conforms with the rules for asking questions,—a matter which is often omitted,—it is very rarely indeed that a correct answer cannot be rendered. But on the other hand, if a client asks questions just for the sake of asking questions, no reliable judgment can be given, for the heavens at that moment are not in tune with the matter asked about, but reflect only the idle curiosity that prompts the client to tease the astrologer.

It is also stated as an argument against Ptolemy having written the *Centiloquy,* that it was called *The Fruits of his Book,* and that it is not "the fruits," but an independent book. To my mind this is no argument at all. Speaking as a teacher, I should say that the book was intended to be one hundred answers to the major one hundred questions that students keep asking about technique, etc., after they have started to study astrology, and that these aphorisms were compiled by Ptolemy so that he would not have to make repeated answers to the same questions, but could say, "See my Aphorism Number . . ." The *Tetrabiblos* is the textbook, but questions on the Aphorisms would make a good test of what students could do by themselves after they had tried to put the textbook into practice. In this *Centiloquy* Ptolemy gives clues to what astrology can do and what it cannot do, how to elect days successfully for various projects, how judgment may be warped by the astrologer himself, how to progress the Midheaven and Ascendant, how to time events, and what to note in the progress of sickness.

It is quite possible that Ptolemy and Galen the great physician may have conferred and read together. In Book I, Chapter 3 of the *Tetrabiblos,* Ptolemy speaks of the Egyptians as having combined the medical art with astrology.[2] He says:

> And had they [the Egyptians] been of opinion that all expected events are unalterable and not to be averted, they would never have instituted any propitiations, remedies, and preservative measures against the influence of the Ambient, whether present, or approaching, general or particular. But by means of the science, termed by them Medical Mathematics, they combined with the power of prognostication the concurrent secondary influence arising out of the institutions and course of nature, as well as the contrary influence which might be procured out of nature's variety; and by means of these they rendered

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[2] *Tetrabiblos,* translated by J. M. Ashmand (Foulsham Co.)

> the indicated agency useful and advantageous: since their astronomy pointed out to them the kind of temperament liable to be acted upon, as well as the events about to proceed from the Ambient, and the peculiar influence of those events, while their medical skill made them acquainted with everything suitable or unsuitable to each of the effects to be procured. And it is by this process that remedies for present, and preservatives against future disorders are to be acquired; for without astronomical knowledge, medical art would be most frequently unavailing; since the same identical remedies are not better calculated for all persons whatsoever, than they are for all diseases whatsoever.

Since Ptolemy makes various replies to objections which were even then made by astronomers against astrology, I should like to give his reply to the question which keeps on cropping up as to why, since the signs of the zodiac do not any longer coincide with the constellations, astrologers always (in the western world) use the signs and not the constellations. Ptolemy says:[3]

> The beginnings of the signs . . . are to be taken from the equinoctial and tropical points. This rule is not only stated very clearly by writers[4] on the subject, but it is also evident by the demonstrations constantly afforded, that their natures, influences and familiarities *have no other origin than from the tropics and equinoxes,* as has already been shown. And, if other beginnings were allowed, it would *either be necessary to exclude the nature of the signs from the theory of prognostication, or impossible to avoid error in then retaining and making use of them;* as the regularity of their spaces and distances, upon which their influence depends, would then be invaded and broken in upon.

In other words, in spite of the fact that the precession[5] of the equinoxes causes Aries and the other constellations to swing backwards in the ecliptic, the astrologer considers *the heavenly space of 30 degrees subtending the vernal equinox,* to have the influence which he ascribes to Aries, regardless of where the constellation Aries is.

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[3] *Ibid.*

[4] Evidently Ptolemy refers to Grecian, Alexandrine and Egyptian writers preceding himself, whose works are now lost.

[5] *See* Appendix XII.

Ptolemy was apparently most anxious that students of astrology should derive their conclusions regarding events from their scientific deductions, and not from any psychic sense. Whereas a psychic may see a picture of an event, an astrologer does not. He can only describe it according to knowledge of the forces at play before and during the event. Ptolemy says:

> It is not possible that particular forms of events should be declared by any person, however scientific; since the understanding conceives only a certain general idea of some sensible event, and not its particular form. It is therefore necessary for him who practises herein to adopt inference. They only who are inspired by the deity can predict particulars.

Alan Leo tells us in one of his textbooks that he learned his lesson on this matter quite early in his experience. He told a lady, who was a disbeliever in astrology, but who wanted to put his art to the test, that on a certain day she would slightly injure her finger with some household instrument. On her insistent questioning as to just what kind of an instrument it could be he finally said it could be a bread knife. On the day predicted she injured her finger with the scissors, whereupon she told him there was "nothing to astrology." Leo remarks that if he had confined himself, as Ptolemy urged, to general ideas and not branched out into specific ones, he would have been right. An astrologer (*per se*) does not see knives or scissors, but he has a general idea of what Mars in a sign such as Virgo might indicate.

Chapter 7

ASTROLOGY AND KABBALISM

Everything is foreseen, yet freedom of will is given.
AKIBA.

AMONG the most disputed of all matters are the period, date and author of the *Sephir Yetzireh,* or *Book of Creation.* Some say it was known to Pherecydes four hundred years before Christ. In itself it states that it was written by the patriarch Abraham. Many believe it was part of the oral tradition of the Hebrews, which was handed down by word of mouth until it was put in writing by Joseph ben Akiba, who was born about 50 A.D., and martyred by the Emperor Hadrian in 136 A.D., having been accused of sorcery. Akiba died, however, maintaining the charge was false and proclaiming his belief in the one true God. He was one of the principal founders, or rather organizers, of the material in the Mishna.

Then again, authorship of the *Sephir Yetzireh* has been ascribed to Simeon ben Yohai of the second century A.D. This teacher is also credited with having written the *Zohar,* yet this too has been denied. In any case the *Sephir Yetzireh* could not have been compiled very late in the centuries, for we find Saadia Gaon (892-942 A.D.), the main teacher or "gaon" of Sura Academy in Babylonia, wrote a commentary on it, referring to its vast antiquity. Shabbethia Donalo (913-970 A.D.) also wrote a commentary on it. Donalo was born in Oria. He was a prisoner of the Fatimite Arabs, where he learnt both medicine and astrology. He wandered all over the Near East and North Africa, but in spite of his wanderings he found time to write books on medicine and philosophy. His commentary on the *Sephir Yetzireh* is preserved in the Florentine Library.

Rabbi Abraham ben Dior (commonly called Halevi), and

Abenezra wrote commentaries on it. Each ascribed great age to it. Rabbi Moses ben Nachman (b. Gerona, 1194) sometimes called Nachmanides, wrote a commentary on it, and in the fifteenth century Moses Botarel wrote a commentary.

The book itself is very brief. It attemps to give a complete understanding of how the world came into being, through the principles denoted by the twenty-two letters of the Hebrew alphabet with their innumerable permutations. It declares that Thought, Speech, and Action are an inseparable unity in God. The human heart is the center of motion in the human body, just as the axis [1] of the earth is the earth's center of motion. This one thought in itself gave rise to innumerable treatises, such as that of Alfred the Englishman, *On the Motion of the Heart.* The *Sephir Yetzireh* gives an esoteric theory of the qualities which are innate in the seven planets and in the twelve signs of the zodiac. Each of these is assigned to a letter of the Hebrew alphabet. The letters Aleph, Mem and Shin are not given any planetary assignment, for they are the three underlying principles or essentials of the Divine nature,—Aleph of Divine Air (Thought), Mem of Divine Water (Expression including Speech), and Shin of Divine Fire (Action). These are comparable to the astrological quaternaries of Signs, Cardinal, Fixed and Mutable. The book states that there are seven "double" letters, assigned to the seven planets, and twelve "single" letters, assigned to the twelve signs of the zodiac.

The seven "double" letters and their planetary vibrations are:

Beth	the Moon	rules the right eye
Gimel	Mars	rules the right ear
Daleth	Sun	rules the right nostril
Chaf	Venus	rules the left eye
Pay	Mercury	rules the left ear
Resh	Saturn	rules the left nostril
Tau	Jupiter	rules the mouth

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[1] *See* Appendix V.

Surely all this must remind us of the papyrus found in the tomb of the Egyptian Pharaoh, Rameses V.

The twelve "single" letters and their assignments in the zodiac are:

Heh	Aries	rules the right foot
Vau	Taurus	rules the right kidney
Zain	Gemini	rules the right foot
Cheth	Cancer	rules the right hand
Teth	Leo	rules the left kidney
Yod	Virgo	rules the left hand
Lamed	Libra	rules the gall bladder
Nun	Scorpio	rules the small intestine
Samech	Sagittarius	rules the stomach
Ayin	Capricorn	rules the liver
Tzeddi	Aquarius	rules the esophagus
Quoph	Pisces	rules the milt

As all these are given precisely and in very clear-cut fashion, I cannot see any good reason why certain of our modern exponents of Kabbalism should assign some of these quite differently, e.g., "resh" to the Sun. Obviously "daleth," the door, is the appropriate letter for the Sun. Christ speaks of Himself as being the "Sun of Righteousness," and also as being "the Door." In the chapter on the Zodiac of Denderah, we note how the Sun's rays shine on the Door of Initiation, and this Door is the Door of return to Spirit, or to the Prime Mover, which moves the Sun.

I do not plan in this book to debate the evidence of astrology in the Bible. This would be a very vast subject. I do, however, find it necessary at various moments, such as on this question of the *Sephir Yetzireh,* to make some reference to the Bible. If Psalm 119 is studied carefully, in versions which allot each set of eight verses to a Hebrew letter, it will be found that somewhere in the verses is a word or phrase which gives a clue to a meaning contained in the assignment of meanings as stated in the *Sephir Yetzireh* astrological system, which is much more abstruse than the ordinary one. Apparently there are not enough parts of the body to make a complete anatomical system, but this seems to have been overcome by using Kabbalistic assignments together with ordinary ones. The whole scheme was plotted out on what is called the "Tree of Life." (Diagram 10.)

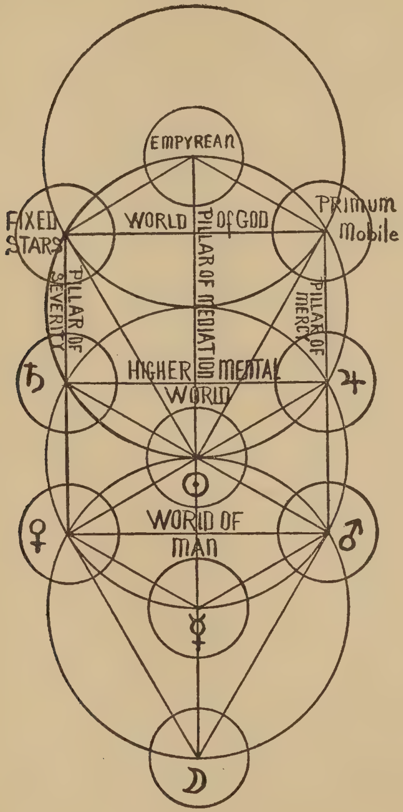
EMPYREAN
PRIMUM Mobile
FIXED STARS
WORLD OF GOD
PILLAR OF MEDIATION
PILLAR OF SEVERITY
PILLAR OF MERCY
♄
♃
HIGHER MENTAL WORLD
☉
♀
♂
WORLD OF MAN
☿
☽

Diagram 10. Kabbalistic Tree of Life showing the Three Worlds and the 10 Sephiroth, as probably conceived by Dante, with three "spheres" above Saturn.

The Kabbalistic "Tree of Life" is not found in the *Sephir Yetzireh,* yet it is necessary to the understanding of the book.

The "Tree" is a geometrical pattern of the ten emanations of the Divine essence, these ten being usually called the "Sephiroth."

This Kabbalistic "Tree" is based on four circles. Through these are three horizontal intersections and three vertical intersections. From all these factors we have various triangles formed, all of which are important in understanding how the "Tree" becomes a cosmic plan.

The four circles in the construction are astronomical in origin and not arbitrary. They are the horizon, the zodiac, the equator and the equinoctial colure. If we connect up every Sephiroth on the diagram lines or "paths," we find that we can make thirty-two connections. These form the thirty-two paths of wisdom. The thirty-third would be the path WITHIN the topmost Sephiroth, called Kether or the Crown.

Kabbalistic knowledge received much attention about the time of Dante, who had a Hebrew instructor, Solomon. Dante uses Kabbalistic astrology as the foundational scheme for his *Divine Comedy*. In the "Paradiso," Kether becomes the Empyrean or place where Dante attains union with the Divine Source or Essence. Also during the Renaissance, Pico della Mirandola, though he renounced astrology proper, still held to his Kabbalistic studies, as did Reuchlin, both believing it a system which, properly explained, would help convert the Jews to Christianity. I might mention here that previously, about 1240 A.D., Abraham Abulafia thought its principles showed the truth of Judaism so clearly that he took his system and his book to Rome and tried to convert the Pope with it. The use of the Kabbala for divination and prophecy does not seem to have started until the thirteenth century when Abraham Abulafia evolved the system of Gematria.

The scheme of the Kabbala reminds us of the Pythagorean doctrine of numbers, the doctrine of emanations and triads of Proclus, and the concepts of Marcus of Haeresiarcha, agnostic teacher of the second century A.D. Marcus stated that there were four emanations, or primal aeons, which descended from the world of the Creator, and from these there was a progressive creation of all manifested beings. Marcus divided the Greek alphabet into three parts and made each part symbolic of the activities involved in creation. It would appear then that there was a study of numbers dating from Babylonian times. Juvenal speaks of the Jews using divination by numbers.

However, let us go back to the Egyptian theory of influences attending the rising of various constellations. Was not this part of some doctrine of emanations?—these emanations not merely causing, or making for, the original creation of the world, but making for continual creation at every subsequent moment? In the Egyptian theory the rising groups of stars affected each successive part of the day, and also some part of the human body. In the *Sephir Yetzireh* the emanations affect parts of the human body, though not quite in the same way as in our modern astrology, yet not quite so differently and unrelatedly as we might suppose. In the course of a thorough study of the ancient principles of esoteric astrology, which hardly enters into the scope of this book, it can be shown that there is a definite symbolic sympathy between the parts of the body mentioned in the *Sephir Yetzireh* as pertaining to various signs and planets, and those parts of the body mentioned in our current system. I am inclined to think that the *Sephir Yetzireh* was based on a very ancient astronomical system, when there were ten signs of the zodiac and not twelve. It is said that at one time the constellations we now term Virgo, Libra and Scorpio were all one constellation,—Scorpio at that period making a very large star group. Part of it was later called Libra and part of it was called Virgo. The *Sephir Yetzireh* was a scheme of cosmogony apparently based on some ancient system which was somewhat evolutionary in scope and definitely opposed to any concept of chance ruling the world.

The doctrine of emanations, as we shall see later, entered into Neo-Platonic thought. Porphyry, one of the leading lights of this school, and so well known to astrologers for his system of House division, or method of calculating the cusps of charts, was translated into Arabic by Al Kindi. Neo-Platonic concepts became, so to speak, incorporated in the Arabic mind and affected Avicenna, Avicebron, Averrhoës and others. When these Arabic writers became popular in Europe, Neo-Platonism again influenced the mediaeval world and gave rise to all kinds of arguments and discussions. Avicenna said that the celestial bodies were animated by "intelligences." This gave rise to discussion as to whether "intelligences" were angels, or not. Angry ecclesiastics said that the doctrine of emanations was heretical, since it was in conflict with the Christian doctrine of the Logos.

The Kabbalistic Tree of Life is a geometrical structure in which the intersecting circles form, as they interlock, three spheroid figures which are symbolically:

(1) The World of God, lying between the Fixed Stars and the Primum Mobile.

(2) The Higher Mental World, lying between Saturn and Jupiter.

(3) The World of Man, lying between Venus and Mars.

The ten essences assigned to the Sephiroth are said to be "living essences," or "emanations," proceeding from the Ain Soph, that is, from God before manifestation, hence the Ain Soph is never depicted on the Tree.

I expect to have many arguments with those who assign the planets differently on this scheme. After much thought extending over many years I feel I cannot agree with other assignments. The right-hand column or perpendicular line is always referred to as the Pillar of Mercy and the left one as the Pillar of Severity. The center one is called the Pillar of Mediation. My experience with many of the old Kabbalists, alchemists, and astrologers too, is that they sometimes reverse certain figures and signs, in order to catch the unwary. The old writers on magic squares (and there were magic squares for every planet), often did this, so that if the student did not know the principles of the magic square, he could not find the right number to put into the square without hours of labor, but if he knew the principle, then a few seconds would suffice. I should also like to give a hint to those studying this Tree, that God's left hand is our right hand and vice versa, hence whereas Severity with us is considered masculine, with God it is not. It is the divine justice, in which even Venus can play a part, since Venus in its highest concept is the unerring sense of what makes for rhythm, balance and harmony, hence it excises from a work of art (with severity) all that is superfluous. I will give the assignment on the Tree as Dante possibly related it to his Kabbalistic scheme of the *Divine Comedy,* which is discussed in Chapter 17.

Empyrean, called by the Hebrews Kether (the Crown), the Cause of this world coming into manifestation. The Spirit ready to manifest.

Primum Mobile, corresponding to Chockmah (Wisdom), the vital energy of the First Cause, setting the world into motion.

Fixed Stars, corresponding to Binah (Understanding), the soul or essence in man, and in all things that are created.

Saturn, corresponding to Geburah (Severity), the cause of form, and the unyielding determination of species to maintain their original form.

Jupiter, corresponding to Gedulia (Magnificence), or to Chesed (Mercy), the principle of growth and expansion.

Mars, corresponding to Netzach (Victory), the creativeness of life.

Sun, corresponding to Tipheroth (Beauty), the life of God in man, which is linked with the life of God,—"the image of God"—within man.

Venus, corresponding to Hod (Splendor), the principle of multiplication, in which the original species is preserved, but the individual in the species is becoming more perfect

Mercury, corresponding to Yesod (the Foundation), the Nous, or mind within man.

Moon, corresponding to Malkuth (the Kingdom). This is the human soul of which the Kingdom is composed, when the soul has been perfected in experience.

Such, then, in brief is this Kabbalistic scheme of the cosmos which has intrigued men through all the centuries. Concerning its Babylonian origin I note the following genealogical tree of the god Bel, in Lenormant's *Beginnings of History*. There are ten names on this tree and the placement is almost identical with that on the Tree of Life. Lenormant says of these ancient Babylonian and Assyrian cosmogonic trees: (See Diagram 11).

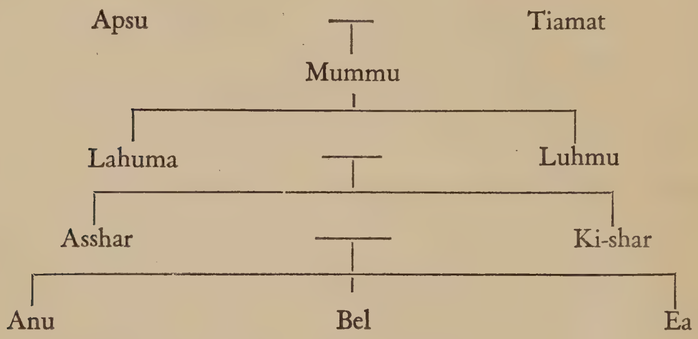

Diagram 11. The tenfold genealogical tree of the god Bel. Some such genealogy may have formed the origin of the Kabbalah.

The fundamental plan of these cosmogonic constructions may be summarized in the following manner: A first principle, material and still unorganized, existing before everything else, and never having had a beginning; at times this first principle is represented as simple and including within itself the two sexes, the idea of maternity predominating; again it is represented as a duality of male and female . . . and finally, in other cases, in the existence of this first principle, duplicating its own essence, may be distinguished a series of evolutions represented by a succession of pairs, like each other, and always solitary, emanating one from the other. From this, when the universe assumes its ordered form, issue three parallel triads of cosmic divinities, each one composed of father, mother, son, in imitation of mortal families.

In other words, then, the Tree of Life is probably founded on genealogical trees of the ancient gods.

Chapter 8

THE ASTROLOGY OF THE ROMANS

The fact is certain, that at some remote period there were mathematicians and astronomers who knew that the Sun is the center of our system, and that the earth, itself a planet, revolves around it.

SIR WILLIAM DRUMMOND.

THE Romans took astrology seriously. Diodorus tells us that judicial astrology started in the period of the Caesars and of Augustus. I think he is mistaken about this. Perhaps what he really means is that it became systematized into a more modern mould. Certainly Manilius does not write as if he invented anything new. In various odd ways we find that the Romans had several divinatory systems, besides that of augury, and one of their most jealously guarded methods was apparently based on "good and bad days" which were discovered according to either a Babylonian or an Egyptian system, probably the latter, since they were called "Egyptian days." The rulers and the priests gave the public only such information as they considered necessary, but they compiled calendars of religious festivals which were given to the people. Also they would give out to applicants favorable days for initiating various enterprises. In this way "favorable days" were a priestly monopoly until Annius Flavius broke the monopoly. History apparently is a succession of periods when monopolies grow and when monopolies have to be broken. About 300 B.C., Annius Flavius, who was secretary to Appius Claudius, thought out a scheme whereby he would ascertain on what system these propitious and unpropitious days were based. All he needed was a sufficient number of replies to various questions propounded on different days. He and various friends then went as often as possible to the temples to obtain propitious days, until at last he discovered that the answers were founded on astrology, and that the Roman Calendar, which at that time was related to legal practice as well as to religious ceremonies, was founded on the motions of the heavenly bodies. The Calendar stated what legal suits and legal acts could be started on specific days. Pliny tells us it was Appius Claudius who urged Annius to do this and to write a book on it called *Jus Flavianum*. Livy tells us that Appius Claudius also suggested that Annius not only do this, but make various whited tablets on which daily information (the Fasti) should be written and placed in the Forum for all to see. For this work he was made a senator but the nobles and clergy hated him. As senator he was chosen by the senate on one occasion to dedicate a temple,—and the Pontifex Maximus of the time, who had previously sworn that he would never allow Annius to be present at the ceremony, had to perform the ceremony and call on Annius for the dedicatory speech. In a sense these whited tablets were the first public calendars of the Romans giving daily suggestions of what should be done on a day.

Few people know that Julius Caesar (102-44 B.C.) was profoundly interested in all phases of divination. We must remember that the rulers of Rome, like the rulers of Egypt, were heads of the Church as well as heads of the State, and that they were initiates of the mysteries and of phases of divination. Julius Caesar was not merely one of the greatest generals of his time and Pontifex Maximus, but he was a thinker, and evidently very psychic too. He wrote a book called *Liber Auspicium,* or *Auguralis,* which gives his theories on divination as practised by the School of Augurs. The School of Augurs seems to have been officially recognized by Rome about 307 B.C., and from that time down to the period of Julius Caesar, four men of patrician class only, were elected, each as a seat became vacant, and upon these four devolved the task of choosing the auspicious time for the undertakings of the state. Macrobius quotes from Julius Caesar's book on this subject.

But Julius Caesar was interested in astronomy and in astrology, and on astronomy he wrote *De Astris,* which is quoted by both Macrobius and Pliny. It treats of the movement of the heavenly bodies. At the time everyone was interested in the poem *Phenomena* of the Greek Aratus, and Julius made up his mind to write just such another. *De Astris* was the result. Who knows but that the campaigns of Julius Caesar were successful because he timed them astrologically? It was not a soothsayer, as Shakespeare tells us, but an astrologer named Vestritius Spurinna who warned Caesar to beware the Ides of March. It is related by several historians that as Caesar was going to the Senate House on the fatal day in question, he said to Spurinna in jest, "Well, the Ides of March are come," upon which Spurinna replied, "Yes, they are come, but not gone." Suetonius, Cicero and Plutarch all refer to Spurinna as an astrologer.

In 46 B.C. Sosigenes of Alexandria advised and assisted Julius in reforming the calendar. This reformed version is known as the Julian Calendar. The month of July was named after him, and when Augustus later made some corrections on this calendar, he wanted a month called after him too, so August was made to oblige. Sir Henry Rawlinson tells us that "the Babylonians knew that the true length of the solar year was 365 days and a quarter nearly," hence it is evident that the Roman calculations did not equal in any way the exactness of the Babylonian year, for the Julian calendar has had to be altered more than once, notably first by Augustus and then by Pope Gregory XIII. Under the latter pope, October 5, 1582, was recognized (by some countries) as October 15. These[1] problems of time have caused astrologers unending difficulty, since reference books do not always say what type of calendar they are using, when giving dates.

Of Sosigenes, W. Marsham Adams says in his *Book of the Master*:[2]

> That famous Greek appears to have performed his task very much after a fashion known to adapters. He cared—perhaps he knew—very

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[1] *See* Chapter 19 on the Gregorian Calendar.

[2] W. Marsham Adams, *Book of the Master* (G. P. Putnam's Sons).

little about the astronomical principles involved in the Egyptian reckoning, and nothing at all about the niceties of further adjustment which it demanded; indeed before half a century was passed, his own corrections required to be corrected. He took no heed of standard or of measure, of orbit or of sacred interval. But first he cut up the year into twelve unequal and unmeaning bits—to say he divided it into portions is far too scientific an expression—which rags bore indeed the name of the insulted Moon, but of which that mighty measurer of Time condescended to make no sort of recognition. And then he threw the "odd day" in along with the "odd month"; much as a child who has broken his toy horse, glues a bit of tail to the shortest of the legs, and calls aloud on creation to admire his handiwork.

Or again in his *House of the Hidden Places*[3] he says:

> The various adjustments of the calendar appear to be regarded as if they were the odds and ends of time left littering about the heavens by the Sun and Moon, and requiring an ingenious astronomer—like Sosigenes—to put away tidily.

In *The Perfect Calendar* by Henry Fitch[4] we read that Sosigenes said there was a discrepancy of about 80 days in the calendar, therefore "Caesar decreed that the year 46 B.C. should have 445 days and that the year 45 B.C. should commence on the first day of the new moon after the winter solstice, which date was to be the first of January. The year 46 B.C. with its 445 days was 'the year of confusion'."

I remember some time ago attending various lectures by Dr. Harold Emerson on the Mayan Calendar. He showed why a Mayan astrologer did not need an ephemeris of planetary positions at all, providing he knew what the positions of the planets were at the time, because the Mayan calendar was so precisely adjusted to planetary motion that one could, with very elementary calculations, find star positions for any previous or succeeding day or year.

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[3] W. Marsham Adams, *House of the Hidden Places* (John Murray).

[4] H. Fitch, *Perfect Calendar* (Funk and Wagnalls, 1928).

While we are on this subject of the calendar, I should like to give a quotation from Sir George Lewis [5] which deals more leniently with the Julian calendar, and which also makes a fair appraisal of the usefulness of ancient astronomical science, and its subsequent lack of usefulness:

> Astronomy, as it has been developed by Copernicus, Kepler, and Newton, and their modern successors, has been treated by mathematical methods, requiring the highest stretch of the reasoning faculty, and has furnished material for sublime contemplation. But it is a science of pure curiosity; it is directed exclusively to the extension of knowledge in a field which human interests can never enter. . . . The periodic time of Uranus, the nature of Saturn's rings, and the occultations of Jupiter's satellites, are as far removed from the concerns of mankind as the heliacal rising of Sirius, or the northern position of the Great Bear. Science ought, indeed, to be pursued for its own sake; and the human mind can be worthily occupied in the acquisition of knowledge which can never lead to any practical result. But if the astronomical science of the ancients was less exact and comprehensive than that of the moderns, it had a closer bearing upon human affairs, and it nearly exhausted those departments which are useful to mankind. . . .
>
> The Copernican system of the universe, and its subsequent completion by the Newtonian theory of Universal Gravitation, have had a purely scientific value, and have exercised scarcely any practical influence upon the affairs of mankind. The solar year was fixed with a close degree to accuracy by the Julian calendar in the year 46 B.C. The reform of the Julian calendar, under the auspices of Pope Gregory, in the year 1582, was only a short time subsequent to the publication of the hypothesis of Copernicus, and was promoted by astronomers who held the Ptolemaic system. This reform of an error amounting to only 11′12″ in a year brought the calendar to perfection; the annual measurement of time has received no improvement since the modern astronomical revolution. With regard to the determination of a ship's place at sea by astronomical methods, the invention of chronometers has been far more important than an improvement in astronomical theory. If the ancients had known the telescope and the clock, their scientific

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[5] Geo. Cornewall Lewis, *Astronomy of the Ancients* (London, 1862).

methods would have sufficed for nearly all practical purposes, although they might have held to their geocentric hypothesis.

I am inclined to see in Lewis' words the crux of the antagonism that seems to exist on the part of some modern astronomers toward astrology. We astrologers rarely make our own observations, but we make use of theirs. They think because we change their heliocentric positions into geocentric ones that our whole theory is founded on false premises, yet we recognize the fact that we need geocentric positions because we live on the earth and not on the sun.

Cicero attacked astrology, say our critics. Well, Cicero was a lawyer and he could plead on both sides, which he did in the case of astrology. One famous commentator, speaking of Cicero, says, "The speculative opinions entertained by Cicero himself are of little importance, except as a matter of curiosity." Cicero was the possessor of a horoscope which showed the probability of eventual murder or of violence, hence in self-protection, as he thought, he tried to believe that there was no truth in astrology, yet he was murdered in a very ignominious way. Perhaps if he had used astrology more and written against it less, he might have found some way of obviating this death, for I think that an astrologer can often warn people to keep out of danger during certain periods.

Cicero wrote *De Fato* and also *De Divinatione*. In the latter he gives credit to Spurinna for warning Caesar, and as Cicero witnessed the death of Caesar, he probably knew the whole story. I should presume that Caesar was something of a fatalist, hence despite every warning he went to the Senate House. Cicero then decided that warnings were useless, and he met his own murderous death because he refused to be warned.

Yet as we read more of Cicero we see that he could not have been a real unbeliever in prognostication. It was that he feared rather than disbelieved it. He says, "The future is revealed to us both from within and without." Cicero also took the trouble to translate the poem of Aratus, hence it is possible that he was well acquainted with both astrology and astronomy. In the British Museum is what is considered to be the original copy of this translation, illustrated with drawings of the constellations.

Cicero informs us that Poseidonius (born about 135 B.C.), one of the late Stoics, was an extremely able astrologer. One might wonder how Cicero knew this. Then we find that Cicero, during his stay in Rhodes, was one of Poseidonius' pupils, and that when the Stoic came to reside at Rome, Cicero still continued the friendship which had grown up between them. Cicero writes of the planetary machine which Poseidonius had invented,—a kind of revolving sphere to exhibit the motions of the Sun, Moon and planets. It would appear that after the time of Poseidonius, the name "apotelesmatics" for astrology became quite common in Rome, as it had been in Greece. It is to Cicero that we are indebted for the statement that "the Babylonian astrological system of divination, as based on birth dates of children,[6] is confirmed by observations which extended over 470,000 years."

The tremendous interest which Cicero always had in divination and astrology was no doubt fostered by the fact that another teacher who instructed Cicero in his early days was the well-known Nuncius Scaevola, the augur, and Cicero grew up hoping that some day he too would be one of the augurs of the city of Rome. Since augury was a kind of governmental monopoly at Rome, Cicero, in his desire for municipal honors, would deem it necessary that he should declaim against what one might term "the bootleggers" of the art. If the state was to be guided by the decisions as given forth by the legally appointed augurs, then the statements of all kinds of "Chaldeans" who thought their work superior to that of the augurs was extremely disconcerting. However, there seems to have been no restriction in Rome at that time, nor at later times, against men of learning and prestige teaching and studying astrology. That I am right in my conclusion is seen from the fact that, not only did a man of Cicero's prestige have Poseidonius as his friend, but that he had two other personal friends who were among the finest astrologers of the day, and who themselves held established positions,—Publius Nigidius Figulus and Lucius Tarrutius Firmianus. If Cicero wrote against some of the astrologers of his day it is possible that Cicero did not like their particular brand of astrology. In his *Dream of Scipio* Cicero certainly calls Jupiter a star "that brings health and prosperity," and he calls Mars "the red planet which is feared." It is also in the *Dream of Scipio* that he states that the world began when all the planets were in Aries, a matter to which we shall refer when we come to Manilius. In this *Dream of Scipio* he waxes quite poetical when he speaks of the path of heaven, the Milky Way, as being a circle of dazzling brightness among flaming bodies, also of stars being seen from the Milky Way which are really great "globular bodies far exceeding the magnitude of the earth." He mentions, too, the nine spheres in which are contained the seven spheres of our planets,—"Of these, that planet which on earth you call Saturn occupies one sphere. That shining body which you see next is called Jupiter, and is friendly and salutary to mankind. Next, the lucid one, terrible to the earth, which you call Mars. The sun holds the next place . . . he is the chief, the leader and director of the other luminaries; he is the soul and guide of the world. . . . He is followed by the orbit of Venus, and that of Mercury as attendants, and the Moon rolls in the lowest sphere, enlightened by the rays of the Sun."

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[6] *De Div.* ii, 46.

We gather from reading Cicero that if he argued now and then against astrology, he was arguing against what was generally considered at the time to be a recognized study, for he says that Achelaus and Cassander were accounted singular in trying to refute it. Again, we might mention that Cicero thought so highly of his own powers of divination that the public office he coveted most of all was that of augur! And as the office was never given to him, it would appear that many of his arguments against divination were the result of a "sour grapes" complex.

Let us see who these two friends of Cicero were, who were such good astrologers.

Nigidius Figulus was a Pythagorean philosopher, considered to be one of the most learned men of his time in mathematics and in physics. He also held the official position of Proctor of Rome. He was such a good astrologer that he was able to foretell to Augustus Caesar that he would be emperor long before that fact seemed feasible, and he also predicted that he would have a long and glorious reign. Lucan [7] tells us that he predicted the Civil War in Rome. Nigidius wrote about twenty-four books, one of which was *De Sphaera Barbarica et Graecanica,* which gave the different systems of astronomical calculations used by astronomers of Greece and other countries. Another of his books was *De Auguriis.* That his books were widely read and copied for many centuries, we learn from the fact that in the sixth century after Christ, a Greek version of his books was made by Johannes Laurentius. Eusebius (264-340 A.D.) calls him "Pythagoricus et Magus." When Nigidius was exiled for taking the part of Pompey instead of Caesar in the Civil War, Cicero wrote him a letter full of the warmest phrases, and expressions of friendship. If Cicero did not mean what he said in this letter, he must have been one of the outstanding humbugs of the age.

Then Lucius Tarrutius Firmianus was a close friend of Cicero, and both of these men earned the friendship of M. Terentius Varro, whose vast and varied learning gave him the appellation of "most learned of all the Romans." St. Augustine says of Varro that he had read so much that we must wonder how he found time to write anything at all. Varro is credited with having written over four hundred and ninety books. One of his books on agriculture tells, among other things, the farmers when to plant both by the Sun and the Moon. Varro also wrote a book called *Human Antiquities,* from which St. Augustine drew very freely in his *City of God.*

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[7] *At Figulus, cui cura deos, secretaque coeli*
Nosse fuit, quem non stellarum Aegyptus Memphis
Aequaret visu, numerisque moventibus astra.
LUCAN i, 639-641.

It was when writing this book *Human Antiquities* that Varro wondered what was the date of the founding of Rome. Cicero tells us that Varro requested Tarrutius to look into the matter, and Tarrutius decided that the only way to go about it was to study the chart of Romulus and see from this in what year he would have been likely to build a city. "According to the scheme of Tarrutius, Romulus was born on the twenty-third day of September, in the second year of the second Olympiad, that is, B.C. 771, and Rome was founded on the ninth day of April, between the second and third hour of the day." [8]

Plutarch, as well as Cicero, gives an account of this, but Plutarch does not say in what year Tarrutius placed the foundation of Rome, but the day given by Varro is earlier than the Palilia (April 21), the usual point of time from which the years of Rome are reckoned. It is from Varro, then, that we obtain the year of the founding of Rome. He places it in 753 B.C. Tarrutius said Rome must have been founded when the Moon was in Libra, the Sun with Mercury and Venus in Taurus, Jupiter in Pisces and Saturn with Mars in Scorpio. (Note that April 9 of that period does not correspond with our April 9). The term A.U.C., used in Roman dates, means "from the founding of the city of Rome." Modern astrologers in checking up on Tarrutius, find that he erred somewhat in his planetary positions, showing that exact positions were hard to determine with the elementary type of instruments obtainable at that period.

Actually, Cicero and his friends took a genuine interest in astrology, but, then, so did all the Roman writers.[9]

Horace and Persius oppose the benign influence of Jupiter to the malign influence of Saturn.

Propertius adds the malign influence of Mars to that of Saturn.

Ovid speaks of a child being born under a sinister planet, such as that of Saturn or Mars. Ovid's story of the ride of Phaeton teems with astronomical and astrological references.

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[8] *Smith's Dictionary of Greek and Roman Biography* (John Murray).

[9] See also under Dryden.

Juvenal is apparently favorable to astrology. He opposes the disastrous nature of Saturn to the favorable influence of Venus, yet he accuses the Jews of casting horoscopes and using necromantic books (*grimoires*).

Horace, after he had escaped safely from the Battle of Philippi, said it was due to the intervention of Mercury, the god of letters. One might add that Mercury is also the god of journeys. Horace asks the believers in heredity and environment this question: "Why does one brother like to lounge in the forum, to play in the campus, and to anoint himself in the bath so well, that he would not put himself out for all the wealth of the richest plantations of the east; while the other toils from sunrise to sunset for the purpose of increasing his fortune?" We also read in Horace (Odes I, II) that the Chaldeans brought to Rome their numerology, and Horace, though interested in astrology, could not believe in numerology. He tried to dissuade Leuconoë from consulting numerologists (*nec babylonis tentaris numeros*). Lenormant,[10] in speaking of Babylonian numerology, says:

> Among the very numerous cuneiform documents which Rassam collected for the British Museum, as fruits of his last mission to Assyria and Babylon, there are several tablets entirely filled with numbers of this description, with indications of the meaning connected with them. There is reason to hope that when they are published and have become objects of scientific study, a corner of the veil which still enshrouds this side of the culture of Ancient Asia may be lifted.

Virgil studied medicine and "mathematics," which one learned commentator says was at that period a jumble of astronomy and astrology. He had studied the *Phenomena* of Aratus, and a great part of his first Georgic rehearses the rules for predicting the weather by astrology. In his *Eclogues* he mentions "the White Bull with golden horns opening the year." This is merely poetical, for neither the Bull nor Taurus opened the year, in his time. Virgil was evidently borrowing a phrase from astrologers who had lived some thousands of years before him. His Fourth Eclogue[11] we mention in Chapter 16. His *Aeneid* is full of such occult lore that it is very easy to see why Virgil was branded in the Middle Ages as a conjurer, necromancer and wizard. Book Six of the *Aeneid* describes the visit to Hades. Hades has three sections, one of punishment, one of expiation, and finally the Elysian Fields, where the shades stay in bliss for one thousand years before they return to earth. From this we see that Virgil openly taught the doctrine of reincarnation:

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[10] F. Lenormant, *Beginnings of History* (Charles Scribner's Sons, 1883).

His hero, Aeneas, finds his father in the west of Pluto's realm, in the happy Elysian Fields. They greet one another with joy, then Anchises conducts Aeneas still further west, until they come to the banks of the River Lethe, whose name means forgetfulness. There are gathered the souls who have been many ages in the Elysian Fields. As these drink of Lethe, they remember no more their previous life on Earth. They begin to desire rebirth. Aeneas is amazed that they cannot be content any more in the Fortunate Land, and questions his father concerning this:

> Anchises answered: "They are souls that wait
> For new bodies, promised them by Fate.
> Now, by the banks of the Lethe here below,
> They lose their memory of their former state . . ."
> "Oh, Father!" said Aeneas, "Can it be
> That souls sublime, so happy and so free,
> Can yearn for fleshly tenements again?"

Anchises explains that when each soul has suffered "his ghostly penance" he enters the Elysian Fields, and then:

> When a thousand rolling years are o'er,
> Called by the god, to Lethe's waves they go,
> There, reft of memory, they yearn once more
> For mortal bodies and the upper air.

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[11] *See* Appendix XIV.

Among the well known writers of Vespasian's time was Pliny the Elder (23-79 A.D.). He wrote *Naturalis Historia,* a voluminous treatise in thirty-seven parts. Among other things, he treats of the nature of the sun, moon and planets. The earth, he believes, is globular in shape and inhabited in every part. The sun-god is the creator and gives life to all mankind, to animals and to vegetation. All planetary gods influence human beings and they were originally named according to their specific work: "For the names of the gods, as well as of the stars . . . have been derived from their services to man. And with respect to Mercury and Jupiter, and the rest of the celestial nomenclature, who does not admit that they have reference to the phenomena of nature?" Pliny also believed in the interrelationship of medicine and astrology.

Marcus Manilius, who lived in the time of Augustus Caesar, wrote an astrological poem in five parts called *Astronomica.* During the tenth century we read of Pope Sylvester II (Gerbertus) commissioning a friend to find a copy of Manilius, and the friend was able to find one, though with difficulty. It was Poggio who discovered a copy about 1414 and who made the book famous in Renaissance times. I can imagine that both were as pleased to find a copy as I was.

Manilius believed, like most of the Pythagoreans and Stoics of his time, that the earth was spherical, and that it had an axis. The teachings of Manilius and others on this subject were very much neglected by later scientists, largely due to the overpowering influence of the views of Aristotle.

Let me quote Manilius, first as to the earth being a sphere:

> The Earth hangs 'midst the yielding air
> Not stretched into a plain, but everywhere
> It rises and declines into a sphere. . . .
> Now if the Earth were flat, the darkened Moon
> Would seem to all eclipsed as well as one:
> At once presenting to the common view
> Her gloomy looks, and prove this fancy true.

But since its figure's round, dim Cynthia's beams
By just degrees must visit the extremes:
Not all at once: She must divide the skies,
And while she sets to some, to others rise.

and secondly on the axis:

Thither the axis runs, and adverse poles
Bear the poised world, while heaven about it rolls;
No solid substance all the weight doth bear
But an imagined line stretched through the air;
Begun from either Pole, the Line extends
Earth's center through, and in the other ends.
For since the frame turns round. . . .

Manilius set up his charts according to modern methods. He considered the work of many "Chaldeans" of his time very slipshod because they used equal house division. Listen to what he says on this:

They equal time allow, and that two hours,
And then from that degree from which the Sun
Begins to start his daily course to run,
Two hours to each succeeding sign they give:
Still thus allowing till their search arrive
At the degree and sign they seek, for where
The number ends, the HOROSCOPE is there,

But false the rule; oblique the zodiac lies,
And signs as near, or far removed in skies,
Obliquely mount, or else directly rise.
In Cancer, so immense his round, the ray
Continues long, and slowly ends the day;
While winter's Caper in a shorter track
Soon wheels it around. . . .

Thomas Creech, in the Preface to his English translation of Manilius, dated October 10, 1696, says Marcus Manilius had lain hidden in the German libraries until Poggio "discovered" him.

We also learn from this Preface that scholars at the time were of opinion that Julius Firmicus had plagiarized from him and must have drawn a vast amount of material from him. Creech also states that Manilius was mentioned by Pliny as a mathematician and by Gerbertus as an astrologer. (Gerbertus was Pope Sylvester II, 999 A.D.) He then goes on to wonder why Quintilian did not recommend him to his Orator to read and declaim, since Quintilian affirms that a competent skill in Astronomy is necessary for any skilled orator. We may gather from this that Creech considered Quintilian skilled in both astronomy and astrology. I might mention that already in 1682 Creech had published his translation of Lucretius, and had noted that Quintilian had recommended both Lucretius and Macer as models of astrological wisdom for an orator to declaim. How much of the technique of astrology Lucretius knew, it would be difficult to find out, but certainly his *De Rerum Natura* opens with a magnificent apostrophe to Venus, whom he addresses as an allegorical representation of the reproductive power of Nature (according to astrological *theory*). Dryden made an English translation of this Hymn, and it can be found in any edition of his collected works. Dryden was one of the most able astrologers of his day.

In order to help date the work of Manilius, Thomas Creech notes that the poem is addressed to the Emperor Augustus Caesar, but as the poem was never finished, it was never presented, for as Creech (who was evidently well acquainted with astrology) points out, Augustus was a Capricornian, and Capricornians have no appreciation of anything which is still in the making. Their imagination is much too limited.

Creech eulogizes the astrology and philosophy of the Stoics, who are credited with having been the mainstay of the astrological science of both the Greeks and the Romans. He points out that Manilius was totally opposed to the atheistical beliefs of the Epicureans and their theory that Chance started the Universe. Let me quote Manilius on the matter:

This vast frame is moved by Providence,
Which like the Soul doth every whirl advance;
It must be God; nor was it made by Chance,
As Epicurus dreamt. He madly thought
This beauteous frame of heedless atoms wrought,—
That seas and earth, the stars and spacious air
Which form new worlds, or do the old repair,
First rose from these, and still supplied remain,
And all must be, when Chance shall break the chain,
Dissolved to these wild principles again.

Absurd and nonsense! Atheist use thine eyes,
And having viewed the order of the skies,
Think, if thou canst, that matter blindly hurled,
Without a Guide, should frame this wondrous world.
But if Chance made, or Chance still rule the whole,
Why do the signs in constant order roll?

Creech, in explaining this outburst against the Epicureans, tells us what were the main tenets of their adversaries the Stoics, for Manilius appears to have been a Stoic:

> The Stoic principles in short were these: They say there is one Infinite, Eternal, Almighty Mind, which being diffused through the universe of well ordered and regularly disposed matter, actuates every part of it, and is as it were, the Soul of this vast body . . . they further add, that this Infinite Mind hath made one general decree concerning the government of the lower world, and executes it by giving such and such powers to the celestial bodies, as are sufficient to produce the designed effects. This decree, thus executed, they call Fate, and upon this their whole system of astrology depends. That some things happened in the world, which were very unaccountable, every day experience taught them; they learned also, or pretended to have learned from very many accurate and oft repeated observations, that there was a constant agreement between those odd unaccountable accidents and such and such positions of the heavenly bodies, and they therefore concluded that those bodies were concerned in those effects. Hence they began to settle rules, and to draw their featured observations into an art; and this was the state and hypothesis of the Stoics (I must call it

so for distinction's sake, though neither the hypothesis itself, nor the astrology, was invented by Zeno, but delivered down to him and his scholars by the Chaldeans and other philosophers[12] of the East), until the Greeks, ambitious of making it appear their own, endeavored to establish support and adorn it with the fables, and by that means made that which before seemed precarious (as all arts which are drawn from bare observation and not from any settled principles in Nature must appear to be), ridiculous fancies, and wild imaginations. . . . This is the hypothesis which Manilius endeavored to explain in Latin verse.

Creech lays the responsibility on Bonincontrius for stating that the title on an old manuscript is C. Manilius, Poet and Illustrious Astronomicon. He also mentions that Poggio calls him Caius Manilius and insists that he was born a Roman and lived in Rome. Creech then goes on to say that, whatever the Christian name is, Caius or Marcus, Manilius gives, or surmises, certain opinions which later ages have thought to glory in as their own discoveries,—one being the concept of "fluid" heavens, as against the static hypothesis of Aristotle. Manilius also affirms that the fixed stars are not all in the same concave superficies of the heavens and hence not all equally distributed from the center of the world. Manilius maintains, too, that the stars are all of the same nature and substance as the sun, and that each has a particular vortex of its own, and lastly he maintains that the Milky Way is merely the undistinguished lustre of many small stars, which the moderns now see, through the glass of Galileo, to be the truth. Creech asks his readers to consider carefully the lines in the poem where Manilius, after indulging in a smile at the old legend of the Milky Way, states that "the spacious band" is made up of little stars:

Which there their beams unite
And make one solid and continuous light.

In Book Two, Manilius describes and analyzes the signs and the aspects between planets. Modern astrologers are inclined to think that twelfth parts of the signs are due to Hindu influence, but here we have them in Manilius. In Book Three he discourses on the twelve houses, and gives the rules for finding the ascendant. In Book Four he discusses professions and why certain astrological types prefer certain businesses and trades. He lists countries ruled by various signs. He tells why certain signs are called tropical and describes their nature. In Book Five he treats of the constellations which rise with various signs. Altogether, Manilius is a very readable author.

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[12] Note that the term "Philosopher" for astrologer was common in the time of Creech.

There was a great deal of speculation among the Romans and the Greeks as to when the world began, and they tried to enquire into it astrologically. Macrobius relates that the Chaldeans believed that the world started at the day and hour when each planet was in its own sign, and at the day and hour when the sign Aries was in the South, the Moon in Cancer, the Sun in Leo, Mercury in Virgo, Venus in Libra and Saturn in Capricorn. In later days Porphyry adopted this view.

This first year of the world, or initiation of the zodiac and the planets, was called the Great Year. However, Manilius, Pliny, Cicero, and Plutarch had another theory on the planetary configuration that inaugurated the Great Year. They said Annus Magnus started "at noon when the Vernal Equinox occurred among the stars of Aries." They further supposed that every planet was in Aries at that period. Ptolemy in his *Tetrabiblos* insists the whole idea is fanciful and absolutely groundless. Astrologers were inclined to accept Ptolemy's view until some years ago when Sepharial, who was a good astrologer and astronomer and a member of various British and French astronomical associations, wrote in one of his books, *The Science of Foreknowledge,*[13] that he had just read a letter from Mr. Samuel Stuart, of Auckland, New Zealand, addressed to the British Astronomical Association and published in their Journal:

> In which he shows that the tables of Ptolemy were quite inadequate for any such retrospective calculation as that which seems to have been

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[13] *The Science of Foreknowledge,* by Sepharial (Foulsham Co., 1918).

made by Manilius. It is true that the Almagest of Ptolemy, although the best work to which the second and third century writers had access, is faulty. But Plutarch, who wrote in the first century, could not have made his statements from knowledge of these tables of Ptolemy.

Manilius, writing in the year 45 B.C., must have had a more profound knowledge of celestial motions than astronomers at that period are credited with. This fact is borne out by the following statement of Mr. Stuart:

By the aid of planetary cycles deduced from modern data we discover that the date wanted is 39,734 years prior to 1801 A.J.C. Then, if we set back the Julian date of 1801 by 100,000 years, it becomes 106,514, from which taking 39,734, we have 66,780, as the year required. And on the day preceding the mean equinox, which was Friday, January 14, old style, or Friday, March 23, new style, in that year, according to the astronomical elements of Leverrier, a calculation of the mean geocentric places of the Sun and planets yields the following curious results:

	Geocentric longitude
Neptune	11 signs and 9 degrees
Uranus	0 signs and 15 degrees
Saturn	11 signs and 19 degrees
Jupiter	0 signs and 25 degrees
Mars	0 signs and 2 degrees
Sun	11 signs and 29 degrees
Venus	0 signs and 27 degrees
Mercury	11 signs and 19 degrees

This gives us:

In the sign Pisces 4 planets:

Neptune	9 degrees Pisces
Mercury	19 degrees Pisces
Saturn	19 degrees Pisces
Sun	29 degrees Pisces

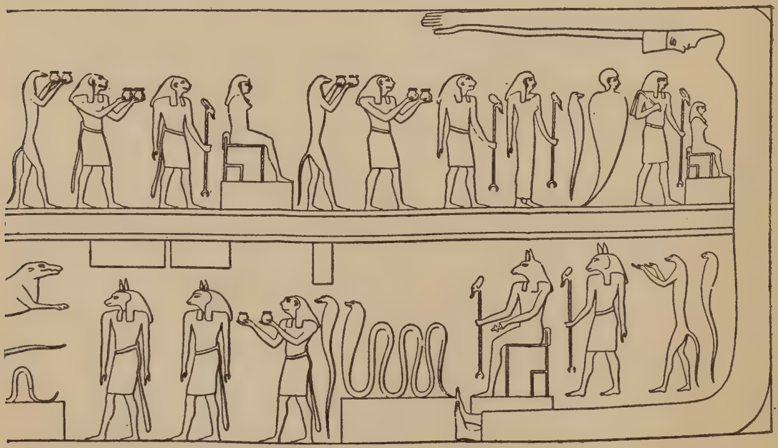
In the sign Aries 4 planets:

Mars	2 degrees Aries
Uranus	15 degrees Aries
Jupiter	25 degrees Aries
Venus	27 degrees Aries

In reference to this position of planets, Mr. Stuart remarks:

> So far as the Sun and the five planets known to the ancients are concerned, the result looks strange enough, but the inclusion of Neptune and Uranus seems extraordinary. In any case the calculations appear to show that the celestial positions which Plutarch seems to describe actually took place, and within a reasonable period of the date to which, in round numbers he approximates. . . . But if so much be granted, it would militate strongly against all that we know as to the astronomy of the ancients, and how they came by the knowledge of such a position might be a very interesting matter.

I think that the more we know of ancient calendars and celestial constellations, whether in Egypt, Babylon, India or Maya, the more we realize that the ancients worked ceaselessly on star observations and on planetary cycles and eclipses in a most amazing way. I also think that the art of astrology, since it causes students to wonder what there is in the face of the heavens to produce (or coincide in time with) any event, is the art which kept astronomy alive through the centuries.



Section One of Zodiacal Pictures from Este, Egypt

Chapter 9

ASTROLOGY AND VARIOUS ROMAN EMPERORS

We are unjust; we never associate destiny with happiness. . . . Why, when we try to sum up a man's destiny, do we keep our eyes fixed only on the tears he shed, and never on his smiles of joy?

MAETERLINCK, *"Wisdom and Destiny."*

EVERY Roman emperor had his astrologer. No doubt all the Greek rulers had them too. History, however, has not recorded the Greek names as faithfully as the Roman ones. We, however, know that Aratus lived at the court of the Macedonian king. Egyptians, Babylonians, Chaldeans, Persians, all had court astrologers, hence we need feel no surprise at the Roman emperors having had faith in astrology, whether in pre-Christian or in Christian times, and this in spite of the fact that these same emperors made statute after statute against astrologers, from the time of Augustus Caesar down to Diocletian. The fashion of having an astrologer at court continued with kings and emperors of the Dark Ages and with those of the Middle Ages too. Kings vied with kings and nobles with nobles to obtain the best astrologers.

It has been fashionable in some circles to blame all the evil deeds of the Roman emperors on their astrologers. I cannot see the logic of this. The emperors did not ask their astrologers what they morally ought to do; they merely enquired if a thing could be done or not. If the emperor wanted certain information and the astrologers said no, the result as a rule would have been dismissal, with or without execution, and the finding of another astrologer who would be more obliging. Yet, in spite of this, we are faced with the historical fact that almost without exception, astrologers stated what they believed to be the truth,—and their record for truth has been higher than that of men in other walks of life.

Doctor Len Broughton[1] evidently had to combat the same statements against Roman astrologers as we of today. Let me quote him:

> About 1830 A.D. a man named Thomas Dick wrote *The Improvement of Society by the Diffusion of Knowledge.* In the attack against astrologers he states that the emperors of Rome had very many edicts against them, but these criminal impostors [astrologers] were protected by the citizens, hence there had to be so many edicts. . . . Are we to understand from Mr. Dick's argument that the people of Rome protected their mathematicians, or astrologers, when they knew them to be frauds, and impostors, as they might have protected thieves, murderers, bandits and pirates, knowing them to be such? Or did not the Romans protect the astrologers because they knew them to be innocent of any crime, and only persecuted by the emperor and senate for some reason of their own—as we read in history of the British government persecuting the Roman Catholics, and driving them out of the British Isles, and at other times persecuting the Presbyterians, Nonconformists, and Puritans, and driving them to the wilds of America . . . and, if the astrologers had been driven out of Rome, would it have made them any worse citizens than the Pilgrim Fathers, who were driven out of England on account of adhering to their religious beliefs?

Augustus Caesar was the grandnephew of Julius Caesar, and as everyone knows, when Julius was assassinated, the conspirators had to be suppressed by force of arms, by land battles and by the great sea battle of Actium, before Octavian, as Augustus had formerly been called, could come to the throne. As we have read, Cicero's friend, Nigidius Figulus, is said to have promised Octavian quite early in life that he would be emperor, but in the stress of civil war, Octavian secretly consulted Theogenius who confirmed the fact that he would surely be emperor. As this came to pass, and Octavian assumed the title of Augustus Caesar, he seems to have patronized two other astrologers, one named

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[1] *Elements of Astrology,* L. D. Broughton, M.D., New York, 1906.

Areus and the other Athenodorus. In fact the Augustan era was one notable for astrology. Manilius wrote astrology. Poets, historians and orators used astrology. One of the best known orators of the period, after Cicero had perished ignobly in the Civil War, was Arellius Fuscus, who said in one of his speeches, "Let us lift up our minds by means of astrology which reveals to us the future, and before the appointed hour of death, let us taste the pleasures of the blest."

Mark Antony too had his astrologers, one of them presented to him by Cleopatra. Since Mark Antony had very little luck after he met Cleopatra, the task of his astrologer must have been very difficult. Probably if the astrologer had suggested he would be better off without her, Cleopatra would have called him an ungrateful wretch, and Mark Antony would have refused to believe him, for, as I said before, most people want an astrologer to tell them how to achieve and to hold everything they want, good or bad.

Augustus Caesar had no sons but he had a stepson Tiberius. When Tiberius was a young man, he grew so tired of all the intrigues of his mother, Livia, who wished him to be the heir to the throne, and he was so disgusted with his wife, Julia, that he slipped away from Rome and went to Rhodes. There he decided to consult Thrasyllus the Elder, in order to find out whether Augustus would make him heir to the throne or not. It is said that Tiberius, who was always noted for his cruelty,[2] intended to murder Thrasyllus after consulting him, but the astrologer, after consulting the horoscope, perceived this. In his reading, therefore, he told Tiberius truly that he would become the emperor. Then he went on to say that his own (Thrasyllus') death was timed for about the same period as that of Tiberius. Needless to say the young man did not carry out his intention of murdering him, but perceiving that he was a good astrologer, he showed him great friendship. When Tiberius was recalled to Rome, Thrasyllus accompanied him, and after Tiberius became emperor, Thrasyllus became the court astrologer. He is said to have died in the year 36 A.D. which was the year before the death of Tiberius, all of which goes to prove that he was not lying when he made his first famous prediction. Tiberius expelled the other astrologers, as far as he was able, from Rome. Tacitus and many other writers speak of Thrasyllus. His son of the same name was an astrologer too, Thrasyllus the Younger. He is credited with having foretold to Nero that he would be emperor.

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[2] Nevertheless, Dante puts him in his *Paradiso*! (*Paradiso,* vi, 86).

Tiberius Caesar was murdered and was succeeded by Caligula. It was Cornelius Felix Sulla, the descendant of the dictator Sulla, who read the chart of Caligula and foretold that he would be the coming ruler.

In the year 19 A.D. Germanicus, the nephew of Tiberius and brother of Claudius, went to Egypt. Here he consulted the oracle of Apis and was told he would come to an untimely end. He is supposed to have died of poisoning. He seems to have been a much finer type than Claudius and was interested in all the arts and sciences, writing various comedies and making a Latin translation of Aratus. He also wrote a poem called *Prognostica,* which he derived not only from Aratus' poem but from other Greek sources.

Nero, who reigned from 54-68 A.D., was educated by Seneca who, being a Stoic, was also a student of astrology.

Otho was emperor for three months and two days, but he had consulted an astrologer named Ptolemaeus, who predicted he would achieve the throne. Otho murdered his way into power, but as some of the legions were for Vitellius, he fought a while and then committed suicide.

When Vitellius ascended the throne he wanted to expel all the Chaldeans, but several of them told him that the day when he should sign such a decree would be the day of his death. He only reigned for one year (69-70 A.D.) but on the day when he made his proclamation he was captured and murdered,—and not by the astrologers.

Vespasian had for his astrologers Seleucus and Barbillus, the latter having been one of Nero's astrologers. Vespasian, however, expelled all the other astrologers he found in Rome.

Evidently the astrologers came back, for Domitian (81-96), when he came to the throne, made another edict banishing all astrologers. This was partly because he knew that if they looked at his horoscope (and they probably knew it by heart) they would perceive that he had murdered his brother Titus in order to obtain the empire. Being banished, the astrologers sent messages to their friends in Rome and gave him no peace. They definitely named the day when he himself should suffer the same fate as his brother, and they even named the hour. It was to be when the Moon entered a certain degree of Aquarius. The day arrived. Domitian wilted. He retired to his chambers and locked himself in, crying out that if he was murdered when the Moon was in Aquarius, Aquarius should thenceforth be called the bloody sign, and not the sign of the waterman. Stephanus, a freedman, waited most of the day outside the door, then called out that he had an important message to give the emperor concerning the conspirators. He cried out too that the fatal degree of Aquarius was past. Domitian opened the door and Stephanus stabbed him to death.

It is also recorded that Titus, whom Domitian had murdered, had earned the friendship of the learned Apollonius of Tyana. We have no record that Apollonius ever told him he would meet an untimely death. It would seem as if all the kings and nobles of this period might have known that they were potential targets, hence all an astrologer could do would be to pick out the violent days and ask that particular care be taken in doubling the guards. But as guards were often bribed or went over to the conspirators, such factors were part of destiny,—a destiny which all people recognize in such a saying as, "If a man is born to be hanged he will never be drowned."

Apollonius of Tyana (born about 4 B.C.) was one of the most remarkable men who have ever lived if we are to believe all that history and legend have recorded of him. We have to distinguish between him and a great host of men of the same name; for example, there was Apollonius of Laödicea who is said to have written five books on astrology. The manuscript of these is preserved in the Bibliothèque Nationale. He was possibly many years anterior to Apollonius of Tyana. Then of course there was Apollonius of Myndos, the famous astrologer of the time of Alexander the Great.

Apollonius of Tyana belonged to the sect of the Pythagoreans. He was a great traveller, even visiting India. When he returned to Rome, Nero had just given an order that all astrologers and magicians should leave the city, hence Apollonius was arrested. On being brought before the judge he convinced him that he was a real student and was released. This would seem to indicate that some of the antagonism directed against the various Chaldeans was due to their insufficient knowledge of the scientific art. Apollonius is credited with having helped Vespasian to the throne. The story is that Vespasian begged him to make him emperor. Vespasian, like many modern people, apparently had the idea that an astrologer makes things come to pass, instead of merely noting that such and such a thing would, or would not, be in line with possibilities and potentialities as seen in the horoscope. Apollonius quietly remarked, "I have already helped you to become emperor by praying to the gods for a just and venerable sovereign."

Titus was the son of Vespasian and was beloved of Apollonius. Domitian, however, hated both Titus and the seer. The former he murdered but the latter escaped. Some say it was Apollonius who foresaw the hour and manner of Domitian's murder, for history records that at the very moment when it was being perpetrated, Appollonius who was in Ephesus cried out, "That is right, Stephanus, slay the murderer."

Apollonius wrote various books on divination by the stars, on geometry and on astronomy. Some of these have come down to us. He died in 97 A.D. and was awarded divine honors. Coins were struck in his memory and temples were built in his honor.

The case of the Emperor Hadrian (76-138) is very interesting. He also issued many edicts against astrologers, but he was a very fine astrologer himself. Every year he wrote out daily predictions for himself in advance. When the year came that he must predict the date of his own death, he unflinchingly set it forth. Hadrian's action, therefore, in making edicts against astrologers, may be another case where learned astrologers were excepted. He was a capable ruler, a great builder, and a patron of all the arts and sciences.

In Rome stands the Antonine Column, erected in honor of the victories of Antoninus Pius. Carved at the base of the column is a representation of Jupiter Pluvius,—Jupiter, the god of Rain,—Jupiter, the ruler of Pisces.

The story of how Jupiter Pluvius came to be carved on the Antonine Column is very interesting. Historians speak of the event as "the miracle of the thundering rain."

It seems that a revolution against Roman rule had broken out among the Germanic tribes near the Danube. Antoninus (138-161) had to find troops immediately to quell the disturbance. But this was no easy task, for plague had been raging for many months in Rome and the surrounding territory, and many of the Emperor's best legions were no more. Money was scarce, for no one had been able to work. The situation was most critical. Antoninus with his calm deliberate temperament, collected men from whatever source he could. He had them drilled as best he could. He sold his crown jewels and much of the furniture and ornaments from his palace in order to get money to equip and pay his new troops, and he set out with them towards the Danube. He was handicapped from the start, and on arriving at the scene of the rebellion, he found that in every engagement his undertrained troops were no match for the enemy. At length he was surrounded. He and his troops were on a hill, and below in the valley on all sides were seething hordes of barbarians. His retreat was cut off. To Antoninus death was nothing to be feared. The great philosopher was calm and collected. He believed that what was best would always happen, but his army was not composed of philosophers. They were almost in a state of panic, but were prepared to sell their lives dearly.

One morning destruction seemed certain. The enemy were beginning to advance up the hill. Slowly and surely they were mounting towards the Romans. Then a certain astrologer, Julianus the Chaldean, asked an audience of the emperor. Antoninus, adopted son of the Emperor Hadrian, and therefore having some knowledge of astrology, graciously granted this, and to his surprise Julianus told him to have no fear, for help would come at noon and this would be just before the enemy could reach them in force. Julianus evidently had a strong dramatic sense, for he said that he had called on Jupiter Pluvius for help and Jupiter had appeared to him promising definite help to the Roman army at noon, and this, too, he had seen in the horoscope.

There wasn't a cloud in sight. Did Antoninus believe Julianus? At least Antoninus believed in the gods. The enemy were creeping up on all sides. Destruction seemed imminent. Noon was approaching. In a few minutes the great masses would attack. Suddenly and without warning there were terrific volleys of thunder. The skies darkened. A fury of hailstones swept through the mountains. Then the rain descended in such floods and with such force that the barbarians in terror rushed madly down the hill while the noise and cannonading of the thunder continued. The valleys were flooded and many lost their lives trying to struggle home. For days the valleys lay under flood. The enemy troops scattered and finally Antoninus and his men were able to descend safely. And such enthusiasm surged over them, and so great courage possessed them, because their lives had been saved by Jupiter Pluvius, that in all succeeding encounters with the enemy they were victorious. So, on his return home, Antoninus had the Antonine Column erected, and carved at the base was the miracle of the "thundering legions" of the god.

People have said that Julianus was not an astrologer but a psychic. The evidence is against them. He was surnamed Theurgus, and three fragments of an astrological treatise by him are extant. Plato was right. A general should know astrology, if only to predict the weather.

In York Minster, England, is a monument in honor of the Emperor Severus (193-211). Severus, though ruler of all the Romans, was a most able astrologer. Rebellion had broken out in the colony of Britain. Severus, instructed by his astrology, informed the leaders at Rome that he would and could be successful in putting down the rebellion, but that the stars told him that he would never again return to Rome. How many people today would have had the courage to do what they conceived to be their duty, in the face of such a prediction? He went to Britain. He put down the rebellion and shortly afterwards was overcome with fever at York and died there.

Severus is said to have had on the roof of his palace at Rome every kind of instrument for making star observations. The second wife of Severus, the Empress Julia, was also a devotee of astrology. Dion Cassius the historian tells us that she spent "a large part of her time in the study of judicial astrology." We are also told that when looking for a second wife, Severus had consulted various astrologers, one of whom told him of a Syrian woman to whom it had been predicted that whoever married her would one day be emperor. This was Julia, whom he married.

Severus was succeeded by his fiendish son Caracalla, who reigned for six years. In his mother's own apartment he murdered his brother, lest the latter share with him the throne. Caracalla was evidently very psychic, for ever afterwards he was tormented in dreams and while waking, by the ghosts of his father and of his brother. He seems to have become maniacal, for in every city he visited he murdered citizens by the thousands, even in far off Alexandria. His mother Julia opened a letter which came to him from the governor of Rome, warning Caracalla that he had learned from an African astrologer that Macrinus would soon be emperor. Julia immediately sent the letter to her son, but the young man was busy chariot driving, and could not be annoyed opening it. He therefore told the messenger to hand it to Macrinus to read aloud. Caracalla laughed aloud as he listened. Probably Macrinus tried to laugh too, but he meditated. Some weeks later, an Egyptian astrologer, named Serapion,[3] warned the emperor, face to face, that very soon he would come to an evil end for his wickedness. The young despot had Serapion executed. But Rome was tired of Caracalla's tyranny and massacres. A conspiracy was started to put Macrinus on the throne, and Caracalla was murdered by an officer named Martialis.

Later in Roman history we have the story of Alexander Severus (222-235). His death occurred during his last campaign against the Gauls. On the way to Mainz, we are told, he met a Druid[4] who warned him to return to Rome. He refused to do so. Then an astrologer foretold that he would be killed. It seems that Maximinus, one of the commanders of the legion, turned traitor, stirring up the army against Alexander, and saying that he was so ruled, or overruled, by his mother, that he was not fit to be emperor. As the soldiers marched towards the emperor's tent the guards fled. His mother ran out to entreat for him, but this merely infuriated the men the more, because they hated her for her avaricious ways as well as for her influence over her son. The army leaders rushed into the tent and Alexander cried out that his mother's penuriousness and avarice had undone him. He promised to distribute large sums of money, but to no avail, and he was brutally put to death. Maximinus was emperor for three years and then suffered a like fate.

The story of these Roman emperors, with very few exceptions, is a sordid tale of murderers and cut-throats. They were a sorry lot. Who was to blame for such a state of things? The great Stoic philosopher Seneca was the schoolmaster of one of the worst of these emperors,—Nero. Others had the advantage of living in days when both St. Peter and St. Paul were subjects of theirs and visiting Rome. Evidently most of them were too bad to learn from precept or example. They needed strong control. There was a Roman senate and senators, who were supposed to exercise control, but if the senators could not, or would not, try to keep the emperors in check and insist that they behave like decent citizens, certainly the astrologers, who had no legal power or rights at all, ought not to be blamed for the sins of the emperors of Rome.

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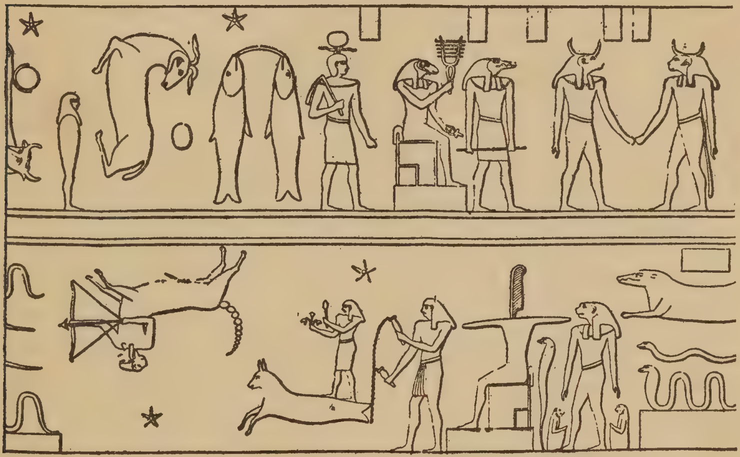
[3] *Lives of the Roman Empresses,* by de Serviez (Wm. H. Wise Co., 1935).

[4] *Ibid.*



Section Two of Zodiacal Pictures from Este, Egypt

Chapter 10

THE ZODIACS OF DENDERAH AND ESTE

Why did not someone teach me the constellations and make
me at home in the starry heavens, which are always overhead,
and which I don't half know to this day?
THOMAS CARLYLE.

FEW authorities are prepared to assign a definite date to the zodiacs of Denderah and Este. In 1798 Napoleon started his ill-starred expedition to Egypt. Although the French occupation was of short duration, it led to a tremendous revival of interest in all Egyptian antiquities. I once read a book written by a French author of the period when the circular zodiac of Denderah was on its journey to Paris. Evidently all Paris was agog with excitement, and discussion as to its great age was rife in the Paris newspapers of the period. The learned author was full of expostulatory horror at the idea of anything that might prove the world was created before 4004 B.C., hence he wrote to prove that it was post-Christian,—and all this was established in his mind before he had even seen the zodiac.

The Honorable Emmeline Plunkett says:[1]

> Volumes of controversy have been written concerning the astronomical teachings of the ceilings of the temples of Denderah and Edfu, as to the colures amongst the fixed stars . . . The date astronomically referred to in these designs was claimed by some to be about 4000 B.C., but when it is proved that these temples had been restored in Ptolemaic times, and the ceilings probably redecorated then, the high claims put forward for the first imaginings of these astronomers could no longer with certainty be upheld. A strong reaction in opinion took place, and it was again asserted that the Egyptians were probably not even acquainted with the so-called Grecian twelve-fold division of the ecliptic until after the introduction of Grecian culture into Egypt. To seek for

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[1] E. Plunkett, *Ancient Calendars and Constellations* (John Murray).

> allusions, in ancient Egyptian mythology or art, to any of the twelve zodiacal signs was, therefore, a much discouraged attempt.
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> But if the ceilings of the Denderah and Edfu temples are rendered suspect by their Ptolemaic restoration, the same objection cannot be raised against the evidence borne by the ceiling of an Egyptian building, which has certainly not been restored in Ptolemaic times. In the *Déscription de l'Égypte,* we find a careful drawing of a "Tableau astronomique au plafond de l'un des tombeaux des rois." In the central portion on either side of this ceiling a monstrous hippopotamus and crocodile are represented . . . The monstrous hippopotamus and crocodile, are, I am strongly inclined to believe, representations, not of any particular constellation, but rather of the solstitial and equinoctial colures . . .

It seems that, on investigation, archaeologists found an inscription stating that the Temple of Denderah, or a portion of it, was restored in the time of Tiberius Caesar. Marsham Adams commenting on this says: [2]

> With equal justice might one of our own mediaeval churches be ascribed to the close of the 18th century, on the strength of an inscription recording in gilt letters the important circumstance of its whitewashing by the churchwardens.

In Chapter 6 of his *Book of the Master,* Adams gives a very vivid account of the construction of the Temple. He says:

> But of the antiquity of the original building there can be no question. For while, as Professor Dumichen has observed, the religious ceremonies on the walls belong to a very remote period, the inscriptions recount how Thotmes III (more than 1500 years B.C.) gave command to rebuild the temple according to the ancient design, so that at that period the plan was already reckoned as antique. Further, the same records tell us how that original building was erected by Pepi, a monarch of the Sixth Dynasty, who reigned 19 centuries before the time of Thotmes, and how even that was not the farthest point to which the history of the structure ascended. For the plan upon which Pepi religiously carried out the ancient design did not originate in his own

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[2] W. Marsham Adams, *Book of the Master* (G. P. Putnam's Sons, 1898).

mind, but was brought to light by him from a crypt, or secret chamber, being written in "archaic characters," says the record, by Khufu himself, the astronomer-architect of the Fourth Dynasty, and buried by him on the spot eight hundred years before the time of Pepi.

Thus, according to Adams, the original temple was planned 4,200 B.C. and erected 3,400 B.C. The problem then is, how much restoration was given to the zodiacs or planispheres which are depicted on the ceilings and walls.

There are two zodiacs of Denderah:

(1) The circular one, from the ceiling of the temple. (See Diagram 12, p. 125.)

(2) The straight one, which formed the mural decoration. (See Diagrams inside front and back covers.)

Achilles Tatius, who may have lived any time between the second and the sixth centuries A.D., and who is said to have written a work on the Sphere and also a Commentary on Aratus, which Commentary is mentioned by Firmicus, tells us that the Babylonian and Egyptian names for the constellations were very different from those of the Greeks. The Greeks borrowed many of the names of the constellations from their own heroes and mythology. They also used for the Balance, the Claws of the Scorpion, and it was not until about the time of Julius Caesar that they used the Balance (see Diagram 13, p. 127), which they took over from Egyptian zodiacs. Now, the zodiacs of Denderah do contain the Balance, so, if the temple was built in the Roman period, it must have been constructed after the time of Julius Caesar, but on the other hand, if made any time before Julius Caesar, then it was definitely Egyptian. Also, in the circular zodiac, we find the leg or thigh used as a symbol for the Great Bear (or Dipper), whence it would appear that when the repainting and restoration took place, the men were working over copies of constellations which are many epochs earlier than that of Julius Caesar, for none of the Romans used the leg as a symbol of the Great Bear.

The circular zodiac contains several constellations symbolized differently from those to which we are accustomed in our modern

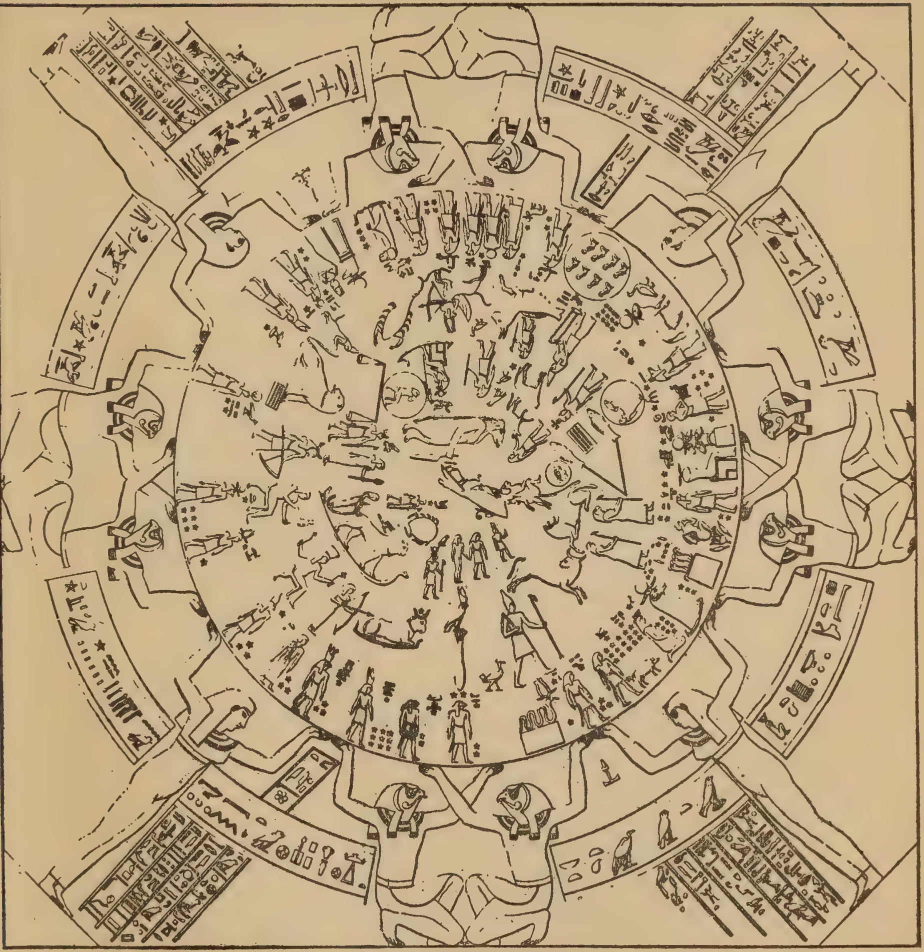

DIAGRAM 12. Zodiac of Denderah. In the center is the ox-leg or thigh. Close to this is the female hippopotamus with her sacrificial knife.

star maps; for example, as we said before, the leg for the Great Bear. The ox-leg apparently was a very malefic constellation to the Egyptians, for in their pictures we sometimes see Horus engaged in fighting a very much alive ox leg. Then, note on the circular zodiac the female hippopotamus, who was supposed to be very kindly and to preside over child birth. She carries a sacrificial knife which looks very much like an umbrella. Around these we have the ram, the bull, the twins (male and female), the crab, the lion, the virgin (carrying a sistrum), the scales, the scorpion, the centaur (with bow and arrow), the goat with a fish tail), the waterman, and the two fishes (tied with the Triangle constellation). Note that the signs are in reverse order to our modern method. This practice of putting signs in reverse order is one that has at various times caused much criticism of astrology. The Hindus do it quite frequently. It is all a question of which way the spectator is looking,—the point of observation. It is not due to ignorance,—not among the ancients. In our ordinary horoscopes they are drawn as though we look south. The zodiac or planisphere of Denderah was supposed to be a picture of the heavens as the Pharaoh saw them when he looked north. The artist represents the heavens as being supported by twelve figures, which might represent the twelve signs, but perhaps more likely the twelve house divisions. Four of these figures are female, supporting the four fixed signs, and the other eight figures are separate ones of Horus, with interlocking arms.

The straight zodiac of Denderah is equally fascinating, as it portrays a drama of initiation. Note the two lines of figures all enclosed by the sky goddess.[3]

On the lower line we start with the sun and moon, the latter represented by the Crab. From the sun, rays are seen pouring forth. Within the rays is a wall and in the wall is disclosed a door. This is the door of initiation which the candidate will have to reach and enter after all his travels, in order that he may enter the temple of the Sun-god, and become one with him.

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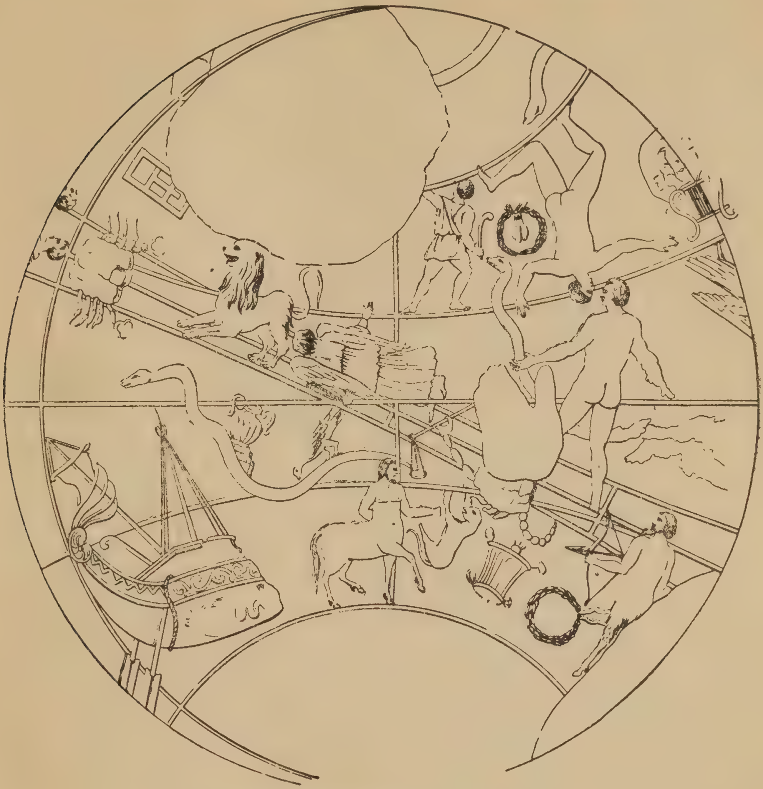
[3] See List of Diagrams after Table of Contents.



GRAECO-EGYPTIAN ZODIAC

Diagram 13. Graeco-Egyptian Zodiac. Six of the signs are shown along the path of the ecliptic,—Cancer, Leo, Virgo, Libra, Scorpio and Sagittarius. Libra, at the point of intersection of the ecliptic and equator, is upheld by the Claw of the Scorpion.

Next, note that the figures along the lower level all travel in one direction,—away from the Sun, that is, on the road of experience outwards or into manifestation, whereas those on the upper level travel in the reverse direction, that is, on the path of the return to the Sun god. Each sign of the zodiac is accompanied by gods and symbols which give clues to the meanings and concepts attached to the signs. As we said before, the start is from the sign Cancer, the womb of universal experience and incarnation. We might note the little boat in which the goat (Capricorn) is seen standing. As the line progresses we see him quite obstreperous, but at the end of the line he is held tightly by the horns. This would seem to show the rise into activity and the final discipline of the qualities of Capricorn,—pride and ambition. After Cancer, on the upper line, we find Gemini, Taurus, Aries, Pisces and Aquarius, all in reverse order of the zodiac.

The upper line of activity discloses Capricorn, Sagittarius, Scorpio, Libra and Virgo (quite mutilated, but showing a female head and enough of the body to make us think she might have been carrying an image of a small child in her hands), and lastly the royal sign Leo which brings us to the door of the Sun.

Evidently, then, the signs from Cancer to Aquarius, that is, those on the left side of our horoscope wheels, were considered signs of outgoing experience, the development of body and mind, whereas the remaining six from Capricorn to the Sun were signs where one brought back the harvest of experience. We shall return to this dual division of the horoscope when we deal with the Neo-Platonists.

From the Temple d'Este,[4] or Temple of the East, we have also two lines of pictures. These are apparently of later date than the Denderah ones and portray an initiation scene. We find that, on the lower line, all the figures travel to the left. They pass through Pisces, Aquarius, Sagittarius, Scorpio, Libra, Virgo and Leo.

On the top line, all the figures travel to the right and pass through Leo (again), Cancer, Gemini, Taurus, Aries and Pisces. The last figure portrays the candidate for initiation enthroned, with the god Osiris behind. But behind Osiris stands the wraith, or soul, or spirit-body of the candidate. He has returned to the god, after life's experiences.

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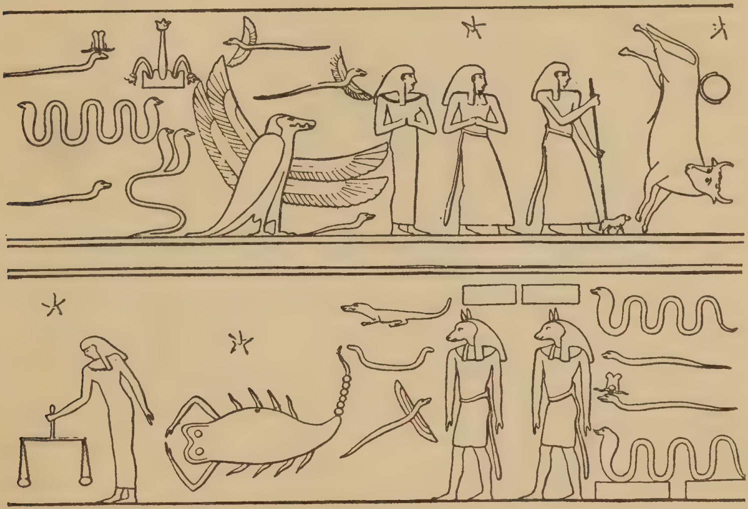
[4] See List of Diagrams after Table of Contents.

In comparing the two sets of pictures of initiation from Denderah and Este, I should conclude that the former portrays initiation considered as a process undergone by the Sun-god himself, whereas the latter portrays initiation undergone by human beings. The two are concepts fundamental to any understanding of astrology as it was conceived in the days when it was inseparable from religion.



Section Three of Zodiacal Pictures from Este, Egypt

Chapter II

THE LATER ROMAN EMPIRE AND BYZANTIUM

Every star communicates with every other star, and with man, by sending out electrical waves.

Michael Pupin.

One can hardly understand the history of astrology in early days without taking cognizance of the fact that the Romans were great road builders. What strikes one most forcibly in reading the lives of Greek and Roman teachers is how extensively they travelled and taught in all countries,—Syria, Egypt, North Africa, Greece, Rome, Spain, France and Britain. In fact, the teachers then seemed to travel more than they do now in these days of cheap tours, and we must remember, too, that they were extremely poor, and so were the itinerant scholars who also wandered from city to city and from country to country in search of knowledge. On the whole, the peasantry of Europe throughout the ages has always been exceedingly kind and hospitable to poor scholars. Then, under Roman rule, roads were built everywhere that "led to Rome," and when the monasteries were founded, if the state or municipality did not keep the roads in order, the monks kept at least the road to the next monastery clear.

Gibbon, in his *Decline and Fall of the Roman Empire,* lays great stress on this ability to travel during the days of the Roman Empire. He says:

> An easy and perpetual intercourse by land and sea connected the provinces of the Roman world; and the life of Hilarion displays the facility with which an indigent hermit of Palestine might traverse Egypt, embark for Sicily, escape to Epirus, and finally settle in the island of Cyprus . . . disciples of Anthony [the monk] went to Bangor, Flint and Iona . . . [in Great Britain].

Also, we must not think that books written by various authors were limited to the one original copy. We know that there were large groups of men called scribes. Some of the more prosperous and more businesslike of these men trained their own slaves from boyhood up to write well, hence we read of great scribes, who were really the publishers of the period, running quite large establishments where one overseer would dictate to a whole roomful of slave-scribes, sentence by sentence throughout the day, while daylight lasted.

One of the most unfortunate literary losses is that of Plutarch's *Life of Aratus*. In this we might have read many stories of a man who was born not for an age but for all time, if we may judge by the great number of learned men who have written Commentaries on his poem, the *Phenomena*. We might also from this have learned more of Plutarch's own astronomical and astrological concepts.

Plutarch (c. 46-120 A.D.) was born in Bœotia. He lived in Greece, in Alexandria and in Rome. When we come to the chapter on the Arabs, we shall see that Plutarch had made considerable research into the Zoroastrian or Sabian religion. His writings contain many stories of astrologers and astrology. He followed in the footsteps of Aristarchus, for he studied in the school which had originally been founded by Aristarchus, at the time when it was under the leadership of Ammonius of Alexandria, who took charge about 66 A.D. In this way the learning of the Greeks continued in a direct line of succession throughout the first century A.D., for Ammonius was a pupil of Alexander of Aegae, who in turn was a pupil of Sosigenes, the peripatetic astronomer who had helped Julius Caesar reform the calendar. Alexander, like Seneca, had the "honor" of being a preceptor of the emperor Nero. He wrote Commentaries on the Meteorology of Aristotle and also on his Metaphysics.

Following in the footsteps of Hippocrates, the physician, with his belief in Critical Days, as found astrologically, was Claudius Galen, a native of Pergamus in Mysia, born towards the end of

130 A.D., close to the time when Ptolemy wrote his *Tetrabiblos*. Galen continually emphasizes the necessity of knowing the position of the transiting Moon during the progress of disease, and its relationship to the planets in the birth chart of a patient. The complete horoscope was thus necessary in his diagnoses, and concerning these diagnoses, he makes the statement, "With the assistance of the Deity, I have never been wrong." It would appear that Galen became interested in astrology because his father had been a most profound student of this subject. Galen tells us that "Disease is contrary to nature and must be overcome by that which is contrary to the disease itself, but nature is preserved by that which has relation to nature."

Galen became physician-astrologer to the emperors M. Aurelius and L. Verus, when they were in Venetia on the North West frontier. Plague broke out among the troops and the emperors decided to return to Rome. Galen accompanied them but he was not able to save Verus from dying of plague.

Many of Galen's works have come down to us. They were largely compiled by Aëtius and Oribasius. In the ninth century his works were translated into Arabic, chiefly through the efforts of Honain ben Ishak. It is quite possible that Galen may have read Ptolemy or even have conferred personally with him. In any case, Galen's and Ptolemy's views on medicine have much in common.

Censorius or Censorinus was a Roman who flourished about 236 A.D. He was a great student and exponent of the principles of astrology. He compiled a treatise entitled *De Die Natali,* which gives the complete astrological concepts and theories concerning the generation of man, his natal hour and its influence on his life and career. He explains in detail all the various methods employed for the division of, and calculation of, time. This book contains so much valuable information concerning various systems of time, that it was very widely read at the period when it was written, and it has since become a reference book on all these matters. Censorinus spoke of astrology, but he delved, too, into all kinds of problems related to astronomy, mathematics, geography and music.

About the period when Censorinus lived, we find that people were not only interested in astrology, but also in palmistry and physiognomy. Polemon about this time brought out his book on Physiognomy. This latter is a subject very much related to astrology, where every sign has its own particular form which it seeks to impress on an individual. It may not always be possible to judge immediately what the Sun sign is of the person one looks at, because its ruler and ruler's placement among the signs, together with the Ascendant, act as modifying agents on the Sun sign. Nevertheless, it is amazing how various astrologers can quickly obtain from observation, either the Sun sign, Moon sign, or Ascendant of birth.

We must mention here the far-reaching influence of the Neo-Platonic School of Philosophers, who were not necessarily astrologers by profession, but whose tremendous interest in astrology brought an apparently new philosophical content into the doctrines of astrology. The School had been founded by Ammonius Saccas, who lived about 170-243 A.D. Among his disciples were Longinus (c. 210-273), Plotinus (c. 204-270), and Origen (c. 186-250). Plotinus investigated the claims of astrology and found them to be just. He, therefore, not only worked hard and assiduously himself, but urged his students also to make researches into astrology.

Porphyry (c. 233-303) was a student first of Longinus (who later became a tutor to Zenobia in Palmyra), and then of Plotinus. Porphyry was strongly Saturnian and very pessimistic. At one time he had decided on suicide, but Plotinus, who had studied Porphyry's chart, knew this and came to him, explaining how this Saturnian aspect might be overcome and life made interesting and useful again. And Porphyry, as he listened to the philosophical reasoning which Plotinus gave as to why he had been assigned such a chart, gave up all thought of suicide. From this we can see that the Neo-Platonic astrology was not fatalistic (though

Longinus did take his own life, but not until he had been sentenced to death by the Emperor Aurelian for assisting Zenobia to revolt). Neither Plotinus nor Origen considered astrology to be fatalistic. They said that the planets were set in the heavens "for signs as well as seasons," for so it is stated in the first chapter of Genesis. Now, since Origen was a shining light in the Eastern Church, we see that astrology would attract more learned men in the Eastern Roman Empire than in the Western part of the Empire, where St. Augustine later, in the fourth and fifth centuries, started to thunder against it, and against a great many other studies, too.

Porphyry wrote the Lives of Plotinus and of Pythagoras, also a Commentary on Plato's *Timæus,* which gives us his philosophical attitude towards astrology. Man, in his descent from on high, travels down through the planets and receives the qualities of each planetary spirit, before he comes to earth. Certain well-meaning critics have tried to clear Porphyry's name of astrological interests, but I am afraid this is not possible, for Porphyry wrote a Commentary on the *Tetrabiblos* of Ptolemy. A translation of this Commentary was printed in Basle in 1559. Several critics in their efforts to deny his astrological leanings have tried to prove that this Commentary was not written by Porphyry at all. They say it was written by a man named Antiochus, but as these critics cannot say who Antiochus was, nor give the date nor period when he lived, it may be just as well to give Porphyry credit for it. In any case, the Commentary exists and bears Porphyry's name, and it shows that interest in astrology was not waning in the third century A.D.

Astrologers, however, have no doubt whatsoever that Porphyry was a real astrological genius. His method of the division of the heavens in regard to the determination of house cusps, became a major study from his own day down to the present. Its followers today include E. H. Bailey of the *British Journal of Astrology*. The "Porphyry Method" was in force until Regiomontanus, Campanus and Placidus de Titus worked on house division and each brought forward his own system. House division is a subject which only astrologers who are also good astronomers, can tackle, hence we see that the Neo-Platonic School were scientific astrologers and not merely nebulous theorists.

Porphyry tells us that if we consider each planet as being in its own sign, and then divide the horoscope into two halves, letting the line of intersection run from Leo to Aquarius (see Diagram 9 *) we have a solar and a lunar division of the signs. From Leo to the end of Capricorn is solar, and from Aquarius to the end of Cancer is lunar. (By solar and lunar we mean here positive and negative signs.) This thought is also contained in the work of Macrobius in the fifth century A.D. There is much truth in this division as I discovered for myself when writing some research material on Pluto a few years ago, for in considering the division I was able to observe the action of Pluto more readily. It has interested me therefore, to find out that this division was apparently known from very ancient times and was kept alive down to Porphyry's time and later. I came across my first clue to the antiquity of the idea in reading Lenormant's *Beginnings of History* [1] where he says, quoting Eckel: "It is this system that the coins of Antioch in Syria indicate, stamped with the sidereal Ram, and above it the bust of Mars, which planet has its *lunar domicile* in this sign." Since Aries, the Ram, is in general parlance a masculine sign, it is not immediately obvious how it can be feminine or lunar unless we know of this masculine and feminine division of the whole zodiac.

In 321 A.D. the Emperor Constantine, who changed the status of the Roman Empire from pagan to Christian, issued an edict threatening all "Chaldeans," magi, etc., with death, but on the other hand Julius Firmicus Maternus, the imperial notary of Byzantium, seems to have been entirely immune, although he was one of astrology's foremost exponents and writers, and his name became famous in his own age and remained so among astrologers throughout succeeding centuries. His birth date does not appear to have been recorded, but he must have written after 334 A.D., for he mentions the eclipse of that year. This was four years after the seat of empire had been changed to Constantinople. He wrote one book called *De Fine Vitae* and another *De Domino Geniturae,* but his crowning achievement was *Libri Matheseous,* or his *Eight Books on Judicial Astrology,* which were, he says, according to the "discipline of the Egyptians and Babylonians." Just how much he owed to Manilius is not clear. He does not mention him. His book has come down to us as it survived the sack of Constantinople in 1453, and was soon afterwards printed in Europe. Book One is a defence of the study. Books Two to Four define terms and give various maxims. Books Five to Eight are devoted to aspects. In these books he includes horoscopes and among them are those of Paris, Homer, Plato, Archimedes, etc.

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* See p. 47.

[1] Lenormant, *Beginnings of History* (Charles Scribner's Sons).

It is Firmicus who brings out the fact that both Julius Caesar and Cicero had translated Aratus. He mentions that he himself had written a book on health and disease, that is, on medical astrology, and that in this book he followed the work of Necepso. Unfortunately this book is not extant.

Pappus and Theon of Alexandria flourished about this time. Both seem to have been good mathematicians. Pappus made a Commentary on Ptolemy, and Theon continued the matter by making Comments on the work of Pappus. From this period we find almanacs by Christian writers, that is, pamphlets giving times for planting, the phases of the Moon, the position of the heavenly bodies, and also Christian feasts and fast days.

In the latter part of the fourth century, we are told by Suidas that Paulus of Alexandria wrote two works on astrology. The first was his *Introduction to Astrology* and the other was entitled *Apotelesmatics.* The word "apotelesmatics" had been used by the Greeks and is apparently derived from the Greek root "telein" to end, signifying the end, result, or effect of what is deduced from stellar positions. We are also told by Suidas that Paulus prophesied the accession of the Emperor Leontius II.

It would seem that there were various men of the same name as Paulus who were also good astrologers. Two of these appear to have lived in the fourth century and one in the ninth century. Ricciolus mentions the latter one, all of which confirms the fact that astrology was not dead between the fourth and ninth centuries.

Then there was Haephaestion of Thebes, one of the first-known definitely Christian writers on astrology, that is, if we decide that the Neo-Platonists were not Christian. He was court astrologer at Byzantium. He may or may not have been the same Haephaestion, an eminent grammarian, who instructed the Emperor Verus in Greek.

In the fourth and fifth centuries we have St. Augustine writing against astrology and against astrologers. The very fact that he complains of them shows that astrologers existed, and in considerable numbers. Also we might mention that if the saint repented of the time he wasted on astrology, he also complains of the time he wasted reading Virgil. I have often wondered why the argument of twins occupied so much of the attention of the saint. To a modern student, when this argument crops up, I always ask them whether, if they were to forget one figure of a modern safe-combination, they could unlock the safe? Surely, a human being is more complex than the lock of a safe. And with twins the slight difference of time makes a variation of degrees on the ascendant which can give a very appreciable difference in character and in the timing of events. Radio experts operate in fractions of seconds. Makers of glass lenses operate in millionths of an inch, and yet critics of astrology presume to tell astrologers that ten or fifteen minutes cannot make any difference in a reading. Tycho Brahe was one of twins, the brother being stillborn, but Brahe did not consider this any obstacle to his astrological beliefs. But then Brahe understood the importance of time. In my own experience, if a different sign does not rise when twins are born, then a different decanate of the sign rises and gives a different sub-rulership. In spite of the "twins" argument, however, St. Augustine seems to be more fearful that astrology is fatalistic than that it is false, and that any fate it reveals is what the demons would will rather than what God wills. Most of the Church fathers were of the opinion that every astrologer was a sorcerer and a necromancer. Since astrology is a science of deductions based on mathematics and geometry, one might wonder how the demons enter. In any case, astrology itself is opposed to necromancy, whatever that is. I see no reason why astrology should be blamed for necromancy, any more than medicine should be blamed for all the potions and charms with which quacks throughout the ages have tried to cure people. In a book by Guy de Cauliac written in 1363 we read, "They [the quacks] attend the armies, and promiscuously use charms, potions, oils and wool." If an "astrologer" makes a judgment by any other means than his mathematical deductions, then it is because he is not really an astrologer. The curse of some people is that they learn some of the "lingo" of the signs and then pretend to be astrologers, and as there is no examination in the art of astrology, much of what these people give out is termed astrology, but should be called something else.

The early Christians refuted all the Greek and Roman authors, whether poets or scientists. Later, the Christian Church allowed their converts to study them, finding that the classics had both a civilizing and humanizing influence. In this way, since there is so much reference to astrology in the classics, considerable interest was taken in the subject, so much so that in the eighth century there was an abortive attempt to Christianize the signs and constellations. Twelve signs were to be the twelve apostles. The Triangle was to be St. Peter's mitre, and the Great Bear was to be his boat.

Apart, however, from the hostility of St. Augustine and other Churchmen, we find hostility in other walks of life. Just as in the present day there are people who are never satisfied with any of the researches and conclusions of scientists, so there were such people in the early centuries. One such person was Sextus

Empiricus, leader of the sceptics of the first half of the third century A.D., who disputed every science of his time: grammar, rhetoric, geometry, arithmetic, astrology, astronomy, medicine and even music. They were all wrong. Everything was wrong. He reminds us of Carneades in the Greek days. He wrote against the "Mathematicii" particularly, because he, the great Know-it-all, knew positively that Chance rules the universe and not law. It is an atheistical belief in a world ruled by Chance and not by God or law that leads him to ask:

> If all the barbarians killed at Marathon were born under the arrow of Sagittarius, or those drowned at Salamis, under the sign Aquarius, the Water-Carrier?

In this question he clearly shows that he did not know the most elementary principles of reading horoscopes, or of making astrological predictions. The type of death in a horoscope is conditioned by the terminal houses, that is, the fourth, eighth and twelfth houses and their rulers. Since all house positions are determined by the birth moment, *and not by the Sun sign,* the question is ridiculous. Incidentally, Aquarius is not a "water" sign as the ignorant Sextus supposed when he spoke of the drownings at Salamis, but an "air" sign,—even if the Waterman does carry an urn full of water.

Coming back to the influence of the Neo-Platonic School, we find one of the shining lights in the fifth century was Proclus, who was born in Constantinople, but who studied also at Alexandria and at Athens. Later he was made rector of the School of Athens. Like many people who work in astrology, he became absorbed in the question of free will and destiny. He held that the corporate part of man is subject to destiny, but the immortal soul, never. Proclus wrote various Hymns to the Sun, Moon and planets. He also wrote an astrological treatise on eclipses. He labored five years in trying to understand the Chaldean oracles. Then to his everlasting fame he wrote a Greek *Paraphrase of the Tetrabiblos* and a Commentary on it. It was this Greek paraphrase which became so important during the period of the Revival of Learning, and which was first translated into Latin by Leo Allatius in 1493 A.D. (though, centuries before that, the Arabs had made translations of it). Proclus, in his doctrine of emanations and triads, seems to be very much in line with the kabbalistic doctrine of the Sephiroth, where the "'emanations" are geometrically related to triangles and triads. (Few people realize that the "triads"[2] are so great a feature of ancient Welsh literature, and are said to have been handed down from father to son from time immemorial.)

The successor and pupil of Proclus was Marinus, who wrote his Life, and evidently did so almost immediately after the death of his master. Marinus preserved the horoscope of Proclus.[3] He was born February 8, 412 A.D. and died April 17, 485 A.D. Marinus mentions an eclipse which he says will occur when the first year of Proclus' death will have been completed.

Macrobius, one of the Neo-Platonic devotees of the fifth century, in his *Saturnalia*, gives an exposition according to which all modes of worship, and the periods for celebrating various gods, might be deduced from the worship of the Sun. This would seem a forerunner to such a book as that of Mabel Collins, the theosophist, who wrote *When the Sun Travels Northward,* in which she draws attention to the fact that the major feasts and holy days of all religions are in the period between the Sun's entrance into Capricorn, and its entrance into Cancer, that is, between Christmas and Midsummer. Macrobius, in Book One of his *Saturnalia,* gives a complete analysis and history of the Roman calendar, and because of this it has become a reference book on early calendars. He also wrote a Commentary, which is not so very illuminative, on Cicero's story of the *Dream of Scipio,* giving a few clues to its occult interpretation, and some rather poor clues to Cicero's astrological ideas.

Then, we have John Laurentius of Philadelphia, sometimes called the Lydan, and sometimes merely Johannes Lydus. He lived about 490–565 A.D., and studied under Agapius, who was one of the disciples of Proclus, hence his astrological bent. He made a Greek translation of the works of Nigidius, who as we have seen before, was a good astrological friend of Cicero.

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[2] *See* Appendix VI.
[3] *See* Index.

Among the source books said to have been used by Boethius are those of Capella. Martinus Capella flourished towards the end of the fifth century, which would be about the time when Boethius was born. Capella may have been born in Dido or Carthage, but he went to Rome and there he made a compendium of learning in nine great tomes:

Books One and Two are called the Nuptials of Philology and Mercury.

Book Three is on Grammar.

Book Four is on Dialectics (Metaphysics and Logic).

Book Five is on Rhetoric.

Book Six is on Geometry.

Book Seven is on Arithmetic.

Book Eight is on Astronomy (including some Astrology).

Book Nine is on Music (including Poetry).

Capella was very popular right down to the Middle Ages. His astronomy was partly astrology but his astronomical theories are important. They give some clues to the true constitution of the solar system. He says that Mercury and Venus revolve around the Sun and not around the Earth. Later, he became one of the sources that Columbus used. In 888 we read of Remigius Antissiodorensis writing a Commentary on Capella, so that evidently he was read in the ninth century.

Boethius, born 470-475 A.D., became a Roman senator under Theodoric, King of the Ostrogoths. At first he was in great favor with Theodoric, who gave him various personal missions, such as finding a musician for King Clovis of the Franks, or a sun-dial for the King of the Burgundians. Later he was accused by his enemies both of being a traitor to the king and of practising magic. He was imprisoned for a long time, and while in prison he wrote his *Consolations of Philosophy,* and finally was beheaded. Gibbon says he spent eighteen years in Athens studying the Greek classics. He also states that Boethius studied under Proclus, in which case, we might infer that he studied astrology. Other writers deny that he studied under Proclus, or that he had any Neo-Platonic tendencies whatsoever. For nearly a thousand years after his death Boethius was a "best seller" in Europe. Gibbon, in Chapter 39 of his *Decline and Fall of the Roman Empire*[4] says:

> For the benefit of his Latin readers, his genius submitted to teach the first elements of the arts and sciences of Greece. The geometry of Euclid, the music of Pythagoras, the arithmetic of Nicomachus, the mechanics of Archimedes, the astronomy of Ptolemy, the theology of Plato, and the logic of Aristotle, with the commentary of Porphyry, were translated and illustrated by the indefatigable pen of the Roman senator. And he alone was esteemed capable of describing the wonders of art, a sun dial, a water clock, or a sphere which represented the motions of the planets.

In 722 A.D. the Lombard King Luitprand honored his memory with a great tomb in a church. Later, the Emperor Otho III built a much more magnificent tomb, and Pope Sylvester II, who himself was sometimes accused of magic because of his studies in Cordova, wrote the epitaph.

Boethius in his *De Consolatione* (Prosa 4 and 5) speculates on freewill and destiny. He says, "Neither does the foreknowledge of what is to happen in the future necessitate the things which are to take place." I mention this, as it seems something that many friends as well as enemies of astrology fail to understand. For example, when several of my astrological friends and myself,—some Democratic and some Republican,—came to the conclusion from Roosevelt's chart, preceding both the 1936 and the 1940 elections, that he would be re-elected, then, after the election, many of the opposition party remarked that his re-election was due to this,—as though foreseeing it as a logical deduction from the positions of the heavens on the day of election, as compared with the positions on Roosevelt's natal day, enabled an astrologer to make it happen. Boethius did not try to teach astrology, but I consider it more than probable that he understood it thoroughly. His works refer to the Ptolemaic astronomy of the day, which usually implies considerable understanding of astrology.

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[4] Gibbon, *Decline and Fall of the Roman Empire* (Macmillan).

When Justinian (483-565) closed many of the scientific schools in Athens and various other places, the scholars emigrated in many directions, but mostly towards the Near East, even as far as Persia, where they were favorably received by the Persian King Chosroes (531–579). Chosroes also made a home in his country for scholars from the Far East, hence there were many Hindus at his court. East and West met in Persia. We must remember too that astrology was not a new thing in Persia, for the Sabian religion based its beliefs on planetary motion and heavenly phenomena. Thus, when the scholars from Athens arrived,—and they were not all Greeks by any means,—they met scholars and teachers from the Far East, as well as from Persia, and there was opportunity to compare their knowledge. Later, as we shall see in our chapter on the Arabs, some of this knowledge, of the Sabians and of the Greeks and of the Far East, flowed back into Europe in richer streams for having been commingled.

But the closing of the schools at Athens was not the end of learning, either in Greece or in other parts of the empire. In the ninth century there was Leo of Thessalonica, known to be living in 869 A.D. He was both a philosopher and an ecclesiastic. He studied in Constantinople, and history tells us that he visited every library in Greece. He studied geometry, astronomy and also astrology. In Constantinople he imparted his knowledge to all who cared to listen. One of his students was captured during the war with the Arabs and taken before the Caliph Al Mamoun. Al Mamoun was so interested in his learning that he questioned him at great length and complimented him on his replies. The young man then said that what he knew was nothing compared with what his teacher Leo knew. Al Mamoun immediately sent to Constantinople for Leo. Because of the war, Leo was afraid to go lest he be considered a traitor, so he showed the letter to the Emperor Theophilus, and Theophilus suddenly realized what a valuable teacher he had in his empire, and that he would be foolish to let him teach at Bagdad instead of in his own country, so he made Leo a professor at the School of the Forty Martyrs. Later, Leo became Archbishop of Thessalonica. Finally, through the efforts of Caesar Bardas, Leo was commissioned to become the head of the new Mathematical School at the Palace of Magnuara in Constantinople, which Michael III established to outrival the schools of the Arabs, which at this time were becoming great centers of ancient Greek knowledge and eager to have all the old Greek manuscripts that they could buy. To say, however, that the Arabs had any monopoly on learning in these centuries is a manifest untruth. It was simply that their great learning went on at Bagdad and other centers at the same time that the Byzantine and Roman learning went on in spite of the bans and restrictions that various more or less well-meaning people put on it at various times.

Gibbon, in his *Decline and Fall of the Roman Empire,* gives us a very good picture of learning at this period. He says:

> While the government of the East was transacted in Latin, Greek was the language of literature and philosophy. . . . After the loss of Syria and Egypt, and the extinction of the schools of Athens and Alexandria, the studies of the Greeks insensibly retired to some regular monasteries, and above all, to the royal college of Constantinople, which was burnt in the reign of Leo the Isaurian (717–740 A.D.).
>
> In the pompous style of that age, the president of the foundation was named the Sun of the Science; his twelve associates, the professors in the different arts and faculties, were the twelve signs of the zodiac; a library of thirty-six thousand five hundred volumes was open to their enquiries. . . . But the seventh and eighth centuries were a period of discord and darkness; the library was burned, the college was demolished. . . . A school was opened in the Palace of Magnuara, and the presence of Bardas (uncle of Michael III) excited the emulation of the masters and students.

> At their head was the philosopher Leo, archbishop of Thessalonica; his profound skill in astronomy and mathematics was admired by the strangers of the East, and this occult science was magnified by vulgar credulity. . . .
>
> At the pressing entreaty of the Caesar, his friend, the celebrated Photius, renounced the freedom of a secular and studious life, ascended the patriarchal throne, and was alternately excommunicated by the synods of the East and the West. . . . The Emperor Basil, who lamented the defects of his own education, entrusted to the care of Photius, his son and successor, Leo the Philosopher, and the reign of that prince and of his son Constantine Porphyrogenitus forms one of the most prosperous periods of Byzantine literature. . . .
>
> Like Friar Bacon, the philosopher Leo has been transferred by ignorance into a conjurer; yet not undeservingly so, if he be the author of the oracles most commonly ascribed to him.

Who was this Byzantine Emperor that ignorant people called a conjurer, and who wrote prophecies?

Leo VI, sometimes called Leo the Philosopher, was Emperor from 886-911 A.D. He had been educated by Photius, one of the most learned men of the time, and he wrote various books. Leo was both an astrologer and a psychic. He wrote *Oracula* in Greek iambics, and in this he gives the fate of each succeeding ruler of the empire. The seventeenth Oracle gives the fall of Constantinople (which took place in 1453), but it also speaks of its final restoration. These oracles became very famous after Leo's time, and were the subject of much discussion during the Revival of Learning, when we find Fabricius writing a Commentary on them. It is interesting that, though Leo foresaw that Constantinople would eventually fall to the Turks, yet he fought against them.

As we proceed with the Eastern Empire we find that even Gibbon has to admit that Anna Commena (b. 1120 A.D.) knew astrology. He says:

> Princess Anna Commena and her mother the Empress Eudocia, were learned in all the arts and philosophy . . . the princess was con-

versant with the artful dialogues of Plato, and had studied the quadrivium[5] of astrology, geometry, arithmetic and music.

Then John Kamateros, patriarch of Constantinople (1198-1204), wrote an astrological poem to the Emperor Manuel Comminus of Byzantium. And Theodorus Metochita, who was said to be one of the best astronomers of the time, wrote a Commentary on Ptolemy and a book on the Sphere, which latter book provided Chaucer with some of the material for his *Treatise on the Astrolabe*. Metochita was astrologer and friend of the Emperor Andronicus the Elder. He died 1332 A.D.

So it would seem as if there had been a continuous line of good astrologers in Greece and in the Near East from the time of Ptolemy down to the time of the fall of the Byzantine Empire.

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[5] *See* Appendix VIII.

Chapter 12

THE INFLUENCE OF THE ARABS AND JEWS

Judicial astrology has played so important a part in the history of the world, and has been so beneficial in furthering the study of astronomy, that it cannot be left out of consideration, if we wish to get a full view of the scientific life and writings of former ages.

J. L. E. Dreyer, *"Life of Tycho Brahe."*

As the Mohammedans grew tired of fighting to proselytize the world, they began to put as much energy into scholarship as they had formerly put into war. Various centers of learning came into being at Bagdad, Cairo, Alexandria, Kairwan in Tunis, Cordova, Toledo, and there was, later, exchange of teachers between these centers necessitating much travel. Just as we saw with the Greeks and Romans, travelling appears to have been the order of the day for both Arabic and Near Eastern students and teachers. Apparently men of learning will fight among themselves, and so will religious teachers, but they are not so interested in international quarrels unless these involve a specific ideology contrary to theirs. In the *Legacy of Islam* we are told of an additional reason for travelling, and this was the necessity for making pilgrimages to Mecca and Medina, compelling students from India, Spain, Asia Minor and Africa to pass through foreign lands where they could visit mosques and academies from Tunis to Persia and from the Caspian Sea to Cordova:

> Until and after Muslim universities in the East and West were founded, many a student set out as a matter of course on a journey of a thousand miles in search of a teacher. Vast journeys from Spain to Mecca or from Morocco to Bagdad were undertaken by young men

who left their homes practically penniless to sit at the feet of a chosen master.[1]

When the Arabs became interested in astrology their artists noted that the zodiac provided very interesting motifs. There was just one problem, however, that the Mohammedan faith forbade the portrayal of human beings. This was circumvented by substituting various other symbols for the "human" signs. For Gemini they substituted two peacocks (which later entered into both Byzantine and Roman Christian drawings). For Virgo they substituted a wheat sheaf and for Aquarius they substituted a mule carrying two baskets, or just baskets alone.

One outstanding factor to be considered in the progress of Arabic learning was the decision of the Jews to work with them. The Jews at first had no cause to like either Christians or Arabs. As we saw in our brief review of the School of Alexandria, Bishop Cyril of Alexandria tried to decimate the Jews. Then when the Arabs came to power, the Caliph Omar wiped out the Alexandrine Library and at Jerusalem set up in 640 A.D., the Mosque called after him, which the Jews said was "the abomination of desolation" prophesied by Daniel, and Omar persecuted Jews everywhere. However, succeeding caliphs were more tolerant and more constructive in policy. Therefore we find large numbers of Jews at Arabic colleges, some of whom took unto themselves Arabic names.

One of the first Islamic centers that opened its doors to Coptic Jews was the holy city of Kairwan, which was founded in Tunis in 670 A.D., and here with the help of Jews from Alexandria and Cairo, it began to outrival those two earlier centers of learning. Kairwan was an important station on the route from Spain to Bagdad. Almost two centuries later its most noted scholar was Isaac ben Solomon Israeli, or Isaac Judaeus (c. 832-932 A.D.), called the Master of the Seven Sciences, that is, of the Trivium and Quadrivium.[2] Isaac was a Coptic Jew who became physician-astrologer to the Prince of Tunis. He said, "Nothing precedes the four elements except the omnipotence of God." He taught that the four elements are generated in the motion of the Sphere, and the Sun itself is moved by the Primum Mobile. He said that souls emanate from the shadow of the Prime Intelligence. In this he seems almost in alignment with the doctrines of Neo-Platonism. We shall see later how Neo-Platonism intrigued the Islamic world, yet this doctrine is apparently contained in the Kabbala. Isaac wrote books on the Elements, on Fevers, on Simple Drugs and Ailments, a Guide for Physicians, etc. As his books on medicine were based on "Critical Days," we see that he combined the knowledge of Hippocrates, Galen, and Ptolemy, and since his books were among the first to be translated into Latin by Constantine the African (c. 1080), they dominated European medicine for many centuries. In fact when we read Robert Burton's *Anatomy of Melancholy* (1577-1640) we find that he is deeply versed in Isaac Judaeus, and quotes from him. Doctor Dee owned several of his manuscripts, including one on Logic, a subject which we now think safe enough, but which as Gibbon found was a handmaid of "superstition."

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[1] *Legacy of Islam,* Oxford University Press.

[2] *See* Appendix VIII.

We speak of "Arabic" learning, but we must be prepared to find that many nations contributed to it besides the Arabs. As we have seen, the Jews contributed, but so also did the Greeks, Romans, Persians, Egyptians, Moors and Syrians, in fact almost all the nations, from the Near East to far off India and China. It should also be realized that although the majority of Arabs were converted to Mohammedanism, yet the devotees of the Sabian religion of the stars did not always alter their views. Many of them apparently stayed quiet until persecution was over, and then they became the foremost scholars in helping the various caliphs Al Mansur, Haroun Al Raschid and Al Mamoun to build up their astronomical, astrological and mathematical centers of learning.

Even before the seventh century A.D. much progress had been made in scientific studies, but the eighth century became the great century of learning, for in the later eight century the new city of Bagdad was founded by the Abbaside dynasty. The first of this line of caliphs massacred all the Ommiad rulers with the exception of one, who escaped and having made his way to Spain, founded the Ommiad dynasty of Spain. We therefore realize that at first there was very great hatred between the Moslems of Spain and those of Arabia, but time in the end healed the wound.

The second caliph of the Abbaside dynasty was Al Mansur who ruled from 754-775. His name means "the victorious." He decided to build an entirely new and beautiful capital—it is said, because he hated the mosquitos that ate him up in the old capital. He sought out the finest engineers and builders of the period and from 762-766 they worked to make Bagdad pre-eminent in beauty and in sanitation. When the city was completed, learned men from all countries were made welcome and invited to settle there, for the city was called Dar es Salem, meaning the City of Peace.

One of the engineering architects who helped was Omar al Farrukhan, a Persian (died c. 815), who wrote a Commentary on the *Tetrabiblos*. One might wonder where the Arabs obtained a copy of Ptolemy's *Tetrabiblos,* but we find that both Haroun Al Raschid and Al Mamoun had it in mind to found the greatest library in the world, to be called the House of Wisdom. Although this was not completed until about 830 A.D., yet the preparatory work of obtaining manuscripts had been going on for many years. Anything and everything of the ancient Greeks and Romans that the collectors of the caliphs could obtain, was bought with joy. In this way the *Tetrabiblos* and the *Almagest* had come to Bagdad, and since few people could read Greek, Al Mamoun (813-833) had his chief translator Abn ben Batrik prepare the translation of the former. Immediately men started to study the *Tetrabiblos* and were delighted with it. The making of commentaries began, and from then on astrology absorbed the minds of the Arabs.

Another of the engineering architects was Messahala[3] (died 815), and he also, like Omar Al Farrukhan, wrote a Commentary on Ptolemy's astrological textbook, following it with various books on astrology and the use of the astrolabe. Messahala was the major source-book for Chaucer's *Treatise on the Astrolabe.* He wrote *De Revolutionibus Annorum Mundi,* that is, on the revolution charts of the year. These are usually made by astrologers for the time when the Sun enters the signs Aries, Cancer, Libra and Capricorn, that is, the changes of seasons, but the change into Aries at the vernal equinox is the basis for the major revolution chart of the year which, adjusted to the longitude of any capital, sheds particular light on the affairs of that capital and country for the following year. Lilly quotes very much from Messahala. In his *Merlinus Anglicus Junior* for 1644 he says, "Mars in the revolution chart of the year, if posited in an air sign, foreshadows injury, oppression and tyranny." Lilly goes on to say that not only does Messahala say this, but that John Hispalensis in his Commentary on Messahala agreed with him. Messahala also wrote a textbook on how to read horoscopes, entitled *De Nativitatibus.* I think I would place Messahala as the most popular Arabic writer of the Middle Ages. He is said to have been Jewish by birth and born in Bassorah. He wrote *De Significatione Planetarum in Nativitatibus,* and a book *De Receptione,* that is, on reception in the chart, or two planets placed, each in the other's house, a very important matter in delineation. Messahala also wrote on what Ptolemy had to say on Elections *(Ptolemaeus De Electionibus),* that is, on how to set the time for certain things to be begun. Messahala's pupil was Albohali (d. 835), who also wrote a book on the technique of astrology, with the same title as his master's book, *De Nativitatibus.* This was a "best seller" in the Middle Ages.

All through mediaeval astrological literature we run across the name Zael. It has been very difficult to obtain much information about him. Many people have supposed he was one of the mediaeval Spanish astrologers, because they have not recognized him under the many names that have been attached to him. Jewish by birth he flourished about 820 A.D., his full name being Sahl ibn Bishr ibn Habib ibn Hani. Sometimes he was called Zachel or Zahel, and sometimes Abu-Uthman. He was a very well known writer on the subject of Elections. His two major books were *De Electionibus* and *De Interrogationibus,* the latter on what we now call Horary astrology, wherein specific questions are answered, not from the natal chart, but from the position of the stars at the moment of asking the question. Albertus Magnus quotes from him. He seems to have been a favorite author of Guido Bonatus, who quotes him frequently, though often to disagree with him.

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[3] Messahala is variously called Ma-shah-allah, Masha'allah, Messahallach, Meseallach and Al Misri.

The Arabic world was growing full of commentaries, but if we remember that these early astrologers were engineers, we shall see that they put Ptolemy to rigid tests. They finally came to Al Mansur and said that they must have their own observatory in order to test out all Ptolemy's rules. A Jewish convert to Mohammedanism, Sind ben Ali, gave the funds, and soon all the "Arabic" scientists were at work computing tables and bringing observations up to date. The amount of work they did was truly incredible. In time the Tables of Al Mamoun came into being and these formed a standard series of observations for many centuries.

Among the workers on these tables was Alfraganus[4] (died c. 880), a native of Fargan in Transoxania. He wrote *Compilatio Astronomica,* which was studied by most mediaeval astrologers, since it gave the elements of astronomy. He also wrote *De Annis Revolutionibus,* which would be on what we call the Aries Ingress chart of the year.

The next matter was to have some good astrolabes made according to the principles set down by Ptolemy. Here both Jacob

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[4] Alfraganus, sometimes called Alfraganius, or Alferganus, or Al Farghani, or Ahmad ibn Muhammed ibn Kathir.

Al Fazari and his son obliged. Jacob is said to have been the person who introduced a Hindu, Manka by name, to the Caliph. This was most important, for it was through meeting Manka that tables of planetary positions were calculated according to Hindu methods and for the longitude of "Arin." The term "Arin theory" crops up all through succeeding centuries. It was Adelard of Bath who first brought the matter to the attention of scholars in England and Europe during the early Norman days, when he translated Al Fazari's book on the subject of "Arin." Let me quote from the *Legacy of Islam*:[5]

> A legacy of still greater importance was the idea that the known hemisphere of the world had a center or "world summit," situated at an equal distance from east, west, north and south. Al Battani[6] speaks of this "cupola" of the earth as an island, but another author of his time (Ibn Rusta) already knows it as the "cupola of Arin." The word "Arin" is a misreading of the Arabic transliteration of the name of the Indian town Ujjiyaini (Ozene in Ptolemy's geography), where there had been an astronomical observatory, and on the meridian of which town the "world summit"—originally an Indian conception—was supposed to lie. Like the Mohammedan astronomers, their Christian disciples considered this doctrine of the highest importance; among the latter were Adelard of Bath, who translated in 1126 the trigonometrical tables of Al Khwarazmi, Gerard of Cremona (1114–1187) and, in the thirteenth century, Roger Bacon and Albertus Magnus. The Arin (or Arim) theory was still later to be found in the *Imago Mundi* of Cardinal Peter d'Ailly, published in 1410, and it was from this book that Christopher Columbus learnt the same doctrine, which had developed in the meantime so far as to make Columbus believe that the earth was shaped in the form of a pear, and that, on the western hemisphere, opposite the summit of Arin, there was another centre, much more elevated than the one on the eastern side, so as to form the shape of a lower half of a pear. Thus Islamic geographical theory may claim a share in the discovery of the New World.

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[5] *Legacy of Islam*, Oxford University Press.

[6] Al Battani, sometimes called Albategnius. His real name was Mohammed ben Gebir ben Sinan al Battani. He was born in Battan, Mesopotamia (c. 850–929).

The whole question of what was the center of the earth has been the subject of discussion and of dogma at many periods. The Jews considered Jerusalem to be the center of the earth, and the Egyptians thought the Great Pyramid was the center of the earth, though some said it was Heliopolis. Although Greenwich is now called the 0 degree meridian, it has never been claimed that this means anything other than a convenient starting point for longitude. In much the same way then, as our ephemerides now are usually calculated for Greenwich longitude, so the Arabs used Arin in India as their starting place for longitude. Ptolemy and the Greeks and Alexandrians appear to have used the Island of Rhodes as their starting point. So long as one knows what the starting point is, it is quite easy to allow for this in calculations for horoscopes. Albategnius (Al Battani) wrote on Geography, but he also wrote on astronomy and on astrology. He made a digest of Ptolemy's works.

In 777 A.D. Jacob ben Tarik, a Jew, had founded a definite School of Astrology in the new capital of Bagdad, and in this astrologers, astronomers and various scientists worked together. As the word "tarik" is the Arabic name for Gibraltar (Geber-el-Tarik) or Rock of Tarik, he may have come from Spain, or he may have used the name of the Arabic chieftain Tarik who conquered the Rock in 700 A.D. As time went on, two great astrologers each in turn became the head of Ben Tarik's School,—Al Kindi and Albumazar.

Jacob Al Kindi[7] flourished about 850. He was an Arab from Kufu, who having been educated at Basra, came to Bagdad and decided to stay. He taught and wrote on astrology, astronomy, mathematics, music and philosophy, but was opposed to alchemy. He translated Porphyry's Commentary on Aristotle into Arabic, and we are generally told that he was responsible for introducing Neo-Platonic views among the Arabs and also among the Jews of his country, though many of these were already conversant with Neo-Platonic views (or kabbalistic views) expressed previously by Isaac Judaeus. I do not think that Al Kindi copied the basic views of either Aristotle or of Porphyry. My own impression is that though he was an Arab, he knew and understood thoroughly the principles of the Sabian religion, and that then, when he came to read Porphyry and Aristotle, he found their views harmonized with his own, because the views of the two former men were so much akin to what he found in Sabianism or Zoroastrianism. As we all know, the Sabian religion was closely related to astrology. However, writers on comparative religion do not tell us how, except that the Zoroastrians worshipped Ahura-Mazda, the Sun god. My first comprehension of what the planets meant in Sabianism was obtained from reading the report of a lecture entitled the *Religion of Zoroaster Considered in Connection with Archaic Monotheism,* given before the Victoria Institute or Philosophical Society of Great Britain by Robert Brown, F.S.A., on April 21, 1879, in which he quotes at great length from Plutarch to the effect that the soul of the righteous (after death) proceeds to the care of the "Immortal Benefactors". Mr. Brown does not state that these are the six planets, but it is very obvious to an astrologer that they are the six planets created by Ahura-Mazda after his great combat with the spirit of Evil, Ahrimon.[8] Brown states that these six gods are not separate gods, but are to be considered as "phases of the beneficent action and of the perfect character of the Supreme,"—in other words, we could call them "Emanations," hence we see why the Neo-Platonic views on Aeons, and the Emanation theories of the Kabbalists, were eagerly read by the Sabians, and later by the Arabs in general. Mr. Brown gives various Persian words and phrases of Plutarch, which he translates, and these give us clues by means of which we can assign these "Benefactors" to the planets, remembering of course, that Ahura-Mazda is the Sun:

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[7] Al Kindi's name was Y'akub ibn Is'hak ibn Subbah (sometimes just Abu Yusaf).

(1) The first Benefactor is called "Good Mind." He wel-

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[8] Due to Persian influence in Early England, we find that the name Ahrimon became colloquially throughout the country "the old Harry."

comes the souls into heaven. Only Good-Mind or good thoughts ever give one the right to enter heaven. (Note in Chapter 17 how St. Bernard, the Saturnian principle, became Dante's guide into the heavenly world.) The first Benefactor then is Saturn.

(2) The second Benefactor is "Truth," the most beautiful truth, the universal order of things, both in the material world and in the kosmos; also it is religion combined with fitting worship and ritual. The term signifies order, righteousness and truth. This god Truth is the personification of light, which reveals truth, and which displays the harmony of the All. This is undoubtedly Jupiter.

(3) The third Benefactor is the god of good government,—the god of the independent sway. Obviously this must be the planet Mars.

(4) The fourth Benefactor is the god of wisdom, or piety,—the perfect sense of filial duty to Ahura-Mazda. This of course would refer to the Moon, the planet of the mother, and of wisdom.

(5) The fifth Benefactor is the god of wealth, but this god is also given the attribute of health, showing that in Sabianism health and wealth were considered to be much the same thing. This god presides over the fruits of the earth and their increase. This would be Venus.

(6) The sixth Benefactor is "the maker of pleasure in what is beautiful." He also ruled the "immortality in which the righteous shall enjoy the loveliness of Ahura-Mazda." This is Mercury, Jove's messenger, the principle of the "Spirit within man," which is immortal.

I think that, from the above, the link between Sabianism, Porphyry and Aristotle is clear. The link was in their philosophy being founded on the same astronomical-astrological concepts. But for various reasons this link with Sabianism has never been brought forward clearly, and Porphyry and Aristotle particularly have always had the credit of being the founders of Arabic philosophy because Al Kindi is known to have read these authors. As various European scholars came to the East seeking "Arabic" wisdom, there flared up another bitter controversy between the Christian Church and the Neo-Platonists, for although Aristotle was at first rejected by the Christian Church, in the long run he was not only accepted, but given almost royal honors. Still, the Porphyrian interpretation of his philosophy was never really welcome. Al Kindi's philosophy has been well stated by Alfred Guillaume in the *Legacy of Israel*:[9]

> Alkindi's own theory of the universe was akin to the *Theology of Aristotle*. The divine intelligence is the cause of the world's existence; its activity is mediated through the heavenly spheres to the terrestrial world. The world-soul is intermediate between God and the world of bodies. This world-soul created the heavenly spheres. *The human soul is an emanation from the world-soul.* There is thus a duality in man: inasmuch as the soul is tied to the body it is influenced by the heavenly spheres, but in so far as it is true to its spiritual origin it is free and independent. Both freedom and immortality are only attainable in the world of intelligence, so that if man would attain thereto he must set himself to develop his intellectual powers by acquiring a right knowledge of God and the universe.

I have underlined the statement that according to Al Kindi (and later Arabs also), the human soul is an emanation from the world-soul, because this statement alone caused volumes and volumes to be written, both for and against, in succeeding centuries. The statement, too, that inasmuch as the soul was tied to the body it was subject to stellar influence was also most important, for it gave a philosophical reason for astrology, while the fact that the spiritual part of man was not subject to stellar influence, pleased the Church in that it prevented astrology from being too fatalistic (a matter often forgotten by succeeding astrologers among both Arabs and Christians.) When, however, this non-fatalistic attitude was presented in the Middle Ages by Albertus Magnus and St. Thomas Aquinas, many of the arguments of the early Christian Fathers fell to the ground, and astrology was made acceptable to the Church if the astrologer would only believe and state to his clients, "astrum regunt hominem, sed regit astra Deus,"—the stars rule man, but God rules the stars. And a man like Tycho Brahe, when writing up the horoscope of one of the King of Denmark's children, states various problems and difficulties that will be met, yet adds, "Potest fata augere, Deus tolere fata."

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[9] *Legacy of Israel*, Oxford University Press.

Al Kindi's work on Aristotle set the Arabic world on fire to know more of Aristotle, so again there came, as there had previously among the Greeks and Romans of the early Christian centuries, a desire to make astrological concepts harmonize with prevailing philosophical concepts. Later, when Al Kindi was translated into Latin in the twelfth and thirteenth centuries, discussions on astrological-philosophical matters swept through Europe like a raging torrent. Gerard of Cremona translated many of Al Kindi's works into Latin. Roger the Englishman translated his book *De Judiciis Astrologicis,* Concerning Judicial Astrology, into Latin in 1272, and it became one of the favorite textbooks of European astrologers. Al Kindi wrote several other textbooks: *Causis Diversitatum Aspectum, Liber De Aspectibus* and *Astrorum Indiciis De Pluvius, Imbribus, Et Ventis Ac Aeris Mutatione.* All these were "best sellers" down to the sixteenth and seventeenth centuries.

Aristotle, Ptolemy and the scientists of Greece and Alexandria were welcome in the Mohammedan world, but not so various other Greek writers. Why did they not study Plato? Apparently it was because Plato's *Republic* and Plato's *Ethics* were suspect. It may be easy to see why the sultans did not approve of anything that savored of democratic ideas, but why turn against the *Ethics*? The Mohammedans believed their own Koran held a place of paramount importance in this field, and a rival was so frowned upon that most people supposed Plato had nothing to offer. The Arabs did not study Greek history, because they hated the Greeks and were ever at war with them. They believed their own heroes infinitely superior to any Greek heroes. They did not study Greek poetry, because they said this encouraged polytheism and tended towards idolatry. All this was most important when Christians came to study Arabic learning. They brought back to Christian Europe the science of the Greeks and of Aristotle, but Europe had to wait until the Renaissance before Plato and the other authors became popular. The Revival of Learning was to a large extent the revival of the Greek learning which the Arabs had despised. Albumazar of Balch (805-885) was a Magian by religion. He was a student of Al Kindi and learned both astronomy and Aristotelian philosophy from his master. Later, Albumazar[10] himself became Professor of Astrology at Bagdad University during the caliphate of Al Mamoun. Albumazar wrote several books on astrology, one called *De Magnis Conjunctionibus Annorum Revolutionibus Ac Eorum Profectionibus,* that is, on the Great Conjunctions, Solar Revolutions, and how to progress them. This was translated by Lali in 1280 and later by Johannes Angeli, or John the Englishman.

The Great Conjunctions were mainly the Jupiter-Saturn conjunctions, which were part of the teachings of El Hakim the Wise, whom we mentioned previously. This book paved the way for hundreds more to be published along these lines, from his own times down to our present day. Saturn rules the old crystallized ideas which are overthrown when the new ideas of Jupiter come along, hence the Jupiter-Saturn conjunctions are used in predictions of changes of government. Another of his books was called *Flores Astrologiae,* or Flowers of Astrology. Then there was *Introductorium in Astronomiam,* or the Introduction to Astronomy, and also his *De Judiciis Astrologicis,* all of them famous textbooks of the Middle Ages. In the latter, particularly, he argues, very much as Ptolemy did, for an astrological science based on actual deductions made from real astronomical observations, and not a semi-psychic method. Up to Albumazar's time the *Great Construction* of Ptolemy had not been translated. It was available only to those who knew Greek, so Albumazar asked the Caliph Ali Hazen Bey Yousseph to provide funds to have it translated. Sabal ibn Tabir was chosen and he finished his task in 827 A.D., the translation being known as the *Almagest,* under which title it has been known ever since among Europeans as well as Arabs. Albumazar immediately made a Commentary on it, as did also Alfraganus and Eben Nozophim.

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[10] Albumazar, sometimes called Abalachus, Jafar ibn Muhammed, Abu Mashas, Al Balkti, and Abu Maschar.

Albumazar's works were well known in the time of Dante. Dante himself was thoroughly conversant with them through his master, Bruno Latini, a learned astrologer of the time, familiar with the wisdom of the Arabians. In the Longfellow translation of the *Divine Comedy,* we find in most editions, notes on the planetary heavens according to the theories of Albumazar. I append one, giving Albumazar's statements on Mercury, because certain critics of astrology have tried to spread the absurd notion, that all these Arabian astrologers (astronomers) did in their high towers, was to find the right direction to Mecca. The Arabs were a very practical people and always delved into science with a view to using their knowledge. I let Albumazar speak for himself:[11]

> For, as Albumazar says in the introduction to his seventh treatise, ninth division, where he treats of the nature of the planets and of their properties, Mercury signifies these twenty-two things among others, namely:
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> desire of knowledge and of seeing secret things;
> interpretation of the Deity, of oracles and prophecies;
> knowledge and profundity of knowledge in profound books;
> study of wisdom;
> memory of stories and tales;
> eloquence and polish of language;
> subtilty of genius;
> desire of lordship;
> appetite for praise and blame;
> color and subtilty of speech;

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[11] *Divine Comedy,* trans. by Henry Wadsworth Longfellow (Boston, 1871).

> subtilty of genius in everything to which man betakes himself;
> desire of perfection;
> cunning of hand in all arts;
> practice of trade;
> selling, buying, giving, receiving, stealing, cheating;
> concealing thoughts in the mind;
> change of habits;
> youthfulness, lust, abundance, murmurs, lies, false testimony; and many other things as being herein contained.

To me this looks as modern as anything in our current astrological textbooks, and when some Harvard scientists speak with horror of the fact that on the news-stands and on library shelves, astrological books and magazines are to be found lying alongside textbooks of science, one wonders if they realize that a certain Henry Wadsworth Longfellow, Professor of Modern Languages at Harvard University, is responsible for inserting the above and much more astrological data in his Dante translation, which we presume lies on the shelves of Harvard Library itself. Perhaps these critics have not looked into Longfellow lately.

In the ninth century we have Al Khwarasm, a native of Khorassan. He was the author of a textbook on mathematics entitled *Al Jawl-wa'l Muga-balaha,* which European schoolboys later shortened to Algebra. This, and the information for his trigonometrical tables, he is said to have derived from various Hindus who had become quite frequent visitors to Bagdad. The latter tables became an essential to those students who wished to make their own star calculations. In his own star observations he used the meridian of Arin. Then he also made a book which condensed much of Ptolemy's material. I do not know of any definitely astrological books he wrote, but his astronomical works were used by the European astrologers for many centuries.

About the same time lived Geber, most renowned of all the alchemists,—a name to conjure with in the Middle Ages. He wrote *Summa Alchemica,* and the *Book of the Seventy,* that is, seventy alchemical treatises. Doctor Dee owned several of his manuscripts. Geber also wrote *De Motu Octavae Spherae,* or Concerning the Motion of the Eighth Sphere, that is, on the Sphere of the Fixed Stars.

On the borders of the ninth and tenth centuries we have the Persian Rhazes, alchemist and physician, with the same belief in "Critical Days" as Hippocrates. We also have the great Persian Al Biruni (973-1048) who studied Sanskrit and who became court astrologer to the ruler of Afghanistan. He wrote *The Elements of Astrology* and believed that the earth had an axis and that the Sun moved around the earth.

Then there was Avicenna (980-1037) sometimes called Ibn Sina, also from Persia. His main treatises were gathered together in the *Canon of Avicenna,* which like all early medical works was based on astrology. A copy of this work was sent to the University of Toledo and carefully guarded by the Moorish professors, but in spite of all their care, Gerard of Cremona, whose only desire in life was to find the next Arabic work to translate for European students, stole the copy, translated it and gave the contents to the Latin-reading nations. This translation of Avicenna meant more to the medical world of Europe than almost any other single happening, for until the seventeenth century Avicenna's Canon was the main textbook. Gerard in fact broke the Arabic and Moorish monopoly of medicine. For some reason every human being hates a monopoly, but mostly when it is someone else's. Later in the 17th century Culpepper broke open the next big medical monopoly by printing the *Pharmacopœia.* Avicenna was quite a philosopher too, as were most of the early great doctors. He wrote *De Anima Mundi,* or About the Soul of the World, in which he stated his belief in spiritual beings controlling the planets. He said that all the planets were animated by "Intelligences." In this he followed Aristotle, Plato, and the Babylonians. He said that the planetary intelligences were not all created at once, but successively. In this he may have followed the Sabian ideas wherein the Sun was created first.

Avicenna's philosophy was later made known to Europe largely through Averrhoës, and then a storm burst in which all Averrhoës' ideas and books were branded as heretical.

Far away in Egypt all the work of these "Arabs" and also those of the Greeks were being studied. Haly Rodoam of Persia, who settled in Cairo about 1203, insisted that his students learn astrology in order that they might understand Hippocrates and Galen. Haly seems to have had a tremendous following among the physicians and astrologers of mediaeval times. Guido Bonatus refers to him continually. Haly also wrote a Commentary on the *Tetrabiblos* of Ptolemy and an Exposition of Ptolemy's *Centiloquy* and *Aphorisms,* several treatises on horary astrology, and a text book *De Judiciis Astrorum,* that tells us how to judge by the stars.

In Cairo the Fatimide Caliph Al Hakim founded a House of Science, which unfortunately was suspended, as the new learning apparently made heretics of the Mohammedan youth as well as of the Christian youth. Science was stepping too far ahead of religious opinion. Just how great were the libraries of the Egyptians and Arabs, we can learn from Gibbon in his *Decline and Fall of the Roman Empire:*[12]

> The Vizier of a sultan consecrated a sum of two hundred thousand pieces of gold to the foundation of a school in Bagdad, which he endowed with an annual revenue of fifteen thousand dinars. The fruits of instruction were communicated, perhaps at different times, to six thousand disciples of every degree, from the son of a noble to that of the mechanic: a sufficient allowance was provided for the indigent scholars; and the merit or industry of the professors was rewarded with adequate stipends. In every city the productions of Arabic literature were copied and collected by the curiosity of the studious and the vanity of the rich. A private doctor refused the invitation of the sultan of Bochara because the carriage of his books would have required four hundred camels. The royal library of the Fatimites consisted of one hundred thousand manuscripts, elegantly transcribed and splendidly

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[12] Gibbon, *Decline and Fall of the Roman Empire* (ii, 812).

> bound, which were lent, without jealousy or avarice, to the students of Cairo. Yet this collection must appear moderate if we can believe that the Ommiades of Spain had formed a library of six hundred thousand volumes, forty four of which were employed in a mere catalogue. Their capital Cordova, with the adjacent towns of Malaga, Almeria, and Murcia, had given birth to more than three hundred writers, and about seventy public libraries were opened in the cities of the Andalusian kingdom.

And in the footnote to this we read:

> The Arabic catalogue of the Escurial will give a just idea of the proportion of the classes. In the library of Cairo the MSS of astronomy and medicine amount to 6,500, with two fair globes the one of brass and the other of silver.

So we see that if anyone wanted to learn either astrology or astronomy the way was open. Let us now turn to the Islamic learning at the other end of the Mediterranean,—"Moorish" learning.

Chapter 13

THE MOORS IN SPAIN

In the tenth century, Arabic Spain was the fountain head of learning in Europe. Thither students were accustomed to repair from every other country to study in the Arabic schools; and many of the chief teachers in the chief towns of France and Italy had finished their education in these seminaries, and were now diffusing among their countrymen the new knowledge which they had thence acquired. . . . There is no trace of this new literature having found its way to England before the Norman conquest. But that revolution immediately brought it in its train.

G. L. Craik, *Manual of English Literature.*

In the year 948 A.D., the Western caliph with many learned Moors and Jews of the city of Cordova, decided to form a Western academy which should be as resplendent as the academies of the East. The school became a great success, and interchange of knowledge came about as the ancient feud between the Eastern and Western caliphs died down. The Jews of Cordova helped in part to maintain both the Cordova Academy and the Jewish academies of Sura and Pambedita near Babylon, the heads of which were termed "gaons." Pambedita Academy had started in 589 A.D. and lasted until 1038 A.D., while Sura had started in 609 A.D. and lasted until 1034 A.D. In both of these, various studies of the Kabbala were conducted by several professors. The works of Isaac Judaeus were also studied.

The cities of Toledo and Granada at first sent students to Cordova, but finally they built academies of their own which outrivalled that of Cordova. Religious toleration was easy to maintain at first, but after about sixty years, persecution set in against the Jews in Cordova, and in 1013 A.D. they were driven to Saragossa, but up to this time great work had been accomplished and the Academy was popular among rulers, merchants, the people and religious refugees from various countries. One of the greatest of the early teachers was Ibn Shaprut[1] (915-990). He was the Caliph of Bagdad's own physician-astrologer. Jewish by birth, he was a good Greek scholar, for when the Emperor of Byzantium sent the Caliph a present of the Greek Codex of Dioscorides' *Botany,* Ihn Shaprut made the translation. This aroused a new interest in the growing of the various herbs necessary to the medicine of the period. The early doctors, who were herbalists, assigned all the known herbs to the planets. Culpepper, the herbalist, followed this school. It required also a knowledge of astrology to know under what signs of the zodiac the herbs should be gathered.

It may have been during Ibn Shaprut's life that Gilbert of Auvergne came to Cordova to study. Gilbert, or Gerbertus, was made Archbishop of Ravenna in the year 998 A.D., and he became Pope Sylvester II (999-1003) the following year, hence we see that in the early days of religious toleration, not only Moors and Jews studied peacefully together, but many Christians came there also. Just what was learned besides medicine and botany can be made clearer by the following excerpt from the *Legacy of Islam:*[2]

> Among the things brought back by wandering scholars who sought in Muslim seats of learning knowledge unknown in their own countries, the astrolabe was a most important acquisition. An astronomical instrument of ancient Greek invention, improved by the Alexandrine geographer Ptolemy, and perfected by the Muslims, the astrolabe came to Europe some time in the tenth century. Its principal use in the East was to determine the hour of prayer and the position of Mecca. But it also served other purposes like that described in the Story Told by the Tailor, where the glib barber delays his exasperated victim whilst he finds with his astrolabe the precise moment auspicious for shaving.

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[1] See in *Jewish Encyclopedia,* under Hasdai Hanasi.

[2] *Legacy of Islam* (Oxford University Press).

Association with astrology gave the astrolabe and all those versed in its use, a sinister reputation throughout the Middle Ages, when in popular belief astronomy and astrology were synonymous terms. The great tenth-century scholar Gerbert of Auvergne, who became Pope under the name of Sylvester II in 999, was held, from his astronomical learning to have had dealings with the devil during his sojourn in Cordova. In recounting how Gerbert, who "surpassed Ptolemy in the use of the astrolabe," revived the legitimate mathematical sciences in Gaul, where they had long been in abeyance, William of Malmesbury[3] gives a dark hint of his necromantic skill. An interesting relic of late tenth-century science is preserved at Florence—an astrolabe made for the latitude of Rome, which is thought by some authorities to have belonged to Pope Sylvester II.

The earliest dated astrolabe is at Oxford. Made in 984 A.D., it was the joint work of two masters, Ahmad and Malmud, sons of Ibrihim, the astrolabist of Ispahan. Amongst those in the British Museum is an English example dated 1260. Merton College Library possesses the instrument traditionally associated with Chaucer, who wrote a treatise on the astrolabe for his little son.

To mariners the astrolabe was invaluable. Its use for nautical observations, continued in the West until the seventeenth century, when it was superseded by new inventions.

The power of the Moors started to weaken before the Christians in the eleventh century, and one by one the various Moorish cities were captured. Toledo was the last to fall, in 1085 A.D. The Moors were driven into Granada, which held out until 1492 A.D. However, in spite of the change of rulers, the academies continued in Toledo and various other cities. We find distinguished scholars from all over Europe flocking to the Spanish towns in order to round out their education. Toledo for the next three hundred years or so, became famous for its great numbers of translators, who worked on every kind of manuscript that could be found, whether ancient or current, until at length religious persecution, among the Christians themselves, stamped out the liberty which learning demands in any age.

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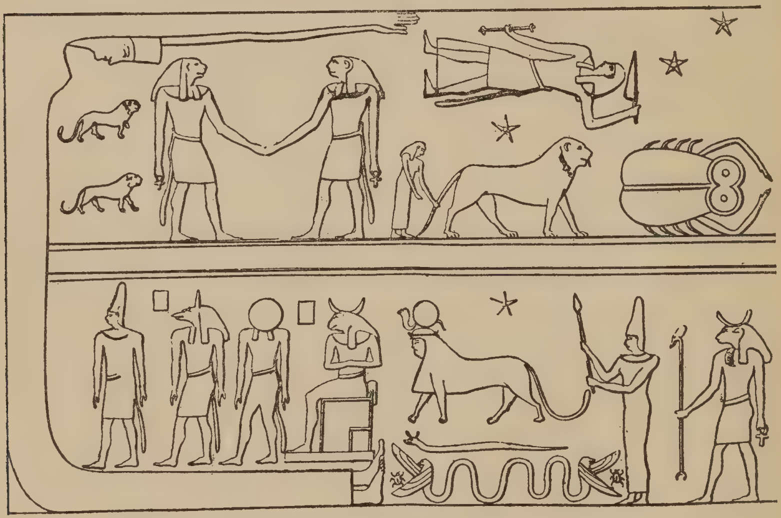
[3] Ashmand records the same matter.

We shall deal with some of the famous teachers and scholars of the Spanish centers of learning in our chapters on Mediaeval Times. The names of Abenezra, Averrhoës, Petrus Alphonsus, John Hispalensis, Ibn Daud, Hiyya Hanasi, Maimonides, and many others, stand out very clearly, but we can study them best in their effect upon the European rather than upon the Moorish world.



Section Four of Zodiacal Pictures from Este, Egypt

Chapter 14

ASTROLOGY IN THE BRITISH ISLES, FRANCE AND GERMANY

To Britain shall come an exaltation,
Britons of the stock of Rome,
May I be judged by the merciful God.

Astronomers are predicting
Misfortune in the land.

Druids are prophesying,
Beyond the sea, beyond Britain,
That the summer shall not be fair.

The nobles shall be broken;
It shall be through want of faith.
TALIESIN, "Lludd the Great."

PEOPLE are inclined to think that though there may have been astrology among the Greeks and Romans in the early centuries before and after Christ, there could have been none among the Britons nor in the rest of Europe. Let us investigate this statement.

The Druids were good astrologers. The Welsh records state that it took twenty years to train a Druid, generally from his seventh to his twenty-seventh year,—quite a university course. Plœtz in his *Dictionary of Dates*[1] says that they were taught Greek. A Druid had to know enough astronomy to set the Druid circles aright, so that on Midsummer's Day, at the summer solstice, the Sun should shine absolutely direct on top of the main stone. No amateur astronomer could do this. The grand entrances at Stonehenge and Abury are set exactly North East. This too is not the work of an amateur. The Druids also knew enough astronomy to celebrate their holy days correctly, and this required a knowledge of the equinoxes, solstices and lunar positions. They instilled a love of learning and a respect for learning into their people which has become traditional down to the present day. We also come upon isolated cases where the Druids gave predictions, as in the case of Alexander Severus, who was met on his last fatal expedition by a Druid (near Mainz) who told him that his expedition would not be successful because his soldiers would betray him. How the prediction was made, astrologically or psychically, we do not know, but there is no particular reason for not thinking it was an astrological prediction. Caesar says that the Druids of Gaul worshipped chiefly Mercury, also Apollo, Mars and Minerva. Apparently, he meant gods with attributes somewhat similar to these.

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[1] Plœtz, *Dictionary of Dates* (Halcyon House).

Elias Ashmole had evidently done a considerable amount of research [2] on the early learning in Britain. He says:

> Caesar testifies (and 'tis a noble testimony) That the Learning of the Druids was first invented in Britaine and thence transferred into France; and that in his time, those of France came over hither to be instructed. Agricola (in Tacitus) prefers the Britaines before the Students of France (notwithstanding that they were of a docible Wit, and apt to Learne). As for Magick, Pliny tells us, it flourished in Britaine, and the People there were much devoted to it (yea, with all Compliments of Ceremony) a man would think that even the Persian learned his Magick there.

I think both Ashmole and Caesar were wrong in thinking the learning of the Celts was first "invented" in Britain. It is evident, from various researches, that it was Eastern knowledge that came along with the Celts [3] on their journey westward, for all the way along their route they built cromlechs and druidical circles, many of which are still extant. It is a curious matter that very rarely did the Romans interfere with the religion of any people they conquered. They were, as a rule, quite tolerant, but in Britain they rooted out the Druids very savagely. Their usual excuse was that the Druids were leaders of insurrections. The Welsh legends of the Cymry of Wales are to the effect that their Druids prophesied that Britain should in the future hold a mightier empire than the Romans and spread "where their eagles never flew," and these prophecies were handed down from poet to poet and from singer to singer all through the ages when the prophecies looked very, very far-fetched. We read of a Roman knight being condemned to death by Claudius for even possessing a Druidic talisman. Evidently the Roman emperors feared the Druids greatly.

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[2] *Theatrum Chemicum,* by E. Ashmole.

[3] *See* Appendix IX.

In the early centuries before Christ we are told that the Phoenicians and Egyptians came as traders. We might remember that the teacher of Pythagoras was a Phoenician and the Phoenicians were astrologically minded. There are places in Britain which every school child knows have been called after the gods of these nations,—Tooting, Tuthill, Pook's Hill, all after the god Thoth, who had rulership over many of the same matters as the god Mercury,—letters, journeys and trade. Then there is the River Isis on which Oxford stands, undoubtedly named after the goddess Isis, the Moon goddess. Nennius, the early historian of the seventh century, Abbot of Bangor, Wales, although his history may be unreliable in parts, nevertheless preserves what was currently believed or recorded in his time. Speaking of the pre-Roman period when Ireland was colonized by Partholanus and Nimick he says:

> Afterwards others came from Spain (that is, the Milesians of Irish history) and possessed themselves of various parts of Britain.

Now the Milesians had formerly been the people among whom Thales, the Greek scientist, was born. They had revolted against Persia and had apparently been annihilated, but actually had travelled westwards in search of new homes, and they no doubt brought their wise men along as well as their soldiers and civilians.

When the Romans came, temples were made to the Roman gods. A temple to Apollo stood on the present site of Westminster Abbey.

A temple to Diana, goddess of the Moon, stood on the present site of St. Paul's Cathedral, hence Nostradamus in one of his quatrains, speaks of St. Paul's as "the ancient Dame." We find too in the Christian period that all the temples which had formerly been dedicated to Mercury (and previously Thoth) became churches dedicated to St. Michael, particularly those in western rocky places such as Mount St. Michael in Cornwall and Mont St. Michel in western France. Later, we find in religious Christian drawings that St. Michael takes on the attributes of the West, the scales of Libra, but he also takes on the work of Mercury in being the guardian of souls at death and after.

Of course, having temples to planetary gods in early Britain did not make the people into astrologers, nevertheless the priests would know more than the people, and as Roman priests came over with the Roman soldiers, we need not think that Britain's Roman temples were in charge of ignoramuses. We find in Britain, as in western Gaul, that when the Romans captured these countries, it was their custom to train various sons of chieftains in all the polite learning of Rome, hence as astrology was one of the subjects studied by the Romans, undoubtedly these young men became conversant with astronomy and astrology. Tacitus tells us these schools were very much improved during the reign of Agricola. When the Romans left in 410 A.D. there is no reason to suppose that everybody suddenly despised learning and threw it aside. There are most learned people today in quite out-of-the-way places. The Roman armies were always kept at their greatest strength in the North of England and in what we call the Lowlands of Scotland, and it was from the North in succeeding centuries, that the great majority of scholars seemed to come. Both Bede and Alcuin came from the North, while Adelard came from Bath in Somerset, and Roger Bacon, too, came from Somerset, for here again the Romans built great camps lest trouble brew on the Welsh marches. There are still preserved a few books used by Celts in the early centuries after the Romans left:

(1) A seventh century edition of Juvencus, an early Christian poet of Spain of the period 270-337, which is interlined with Celtic words in the Scottish dialect.

(2) Several eighth century editions (now in the Bodleian Library) of Eutychius, the Greek grammarian who taught at Constantinople. This is interlined with Welsh glosses.

(3) Ovid's *Ars Amatoria* with Welsh glosses.

(4) A Latin vocabulary with Welsh interpretations.

The contact with a Spanish author at this early time is quite interesting, showing that if books of poetry were acceptable and could be imported, books of science could also have been imported at the time. It also shows that Greek was studied.

The conversion of Britain took several centuries, and we must bear in mind that the inhabitants at the time when the Romans were in occupation were Celts. Many of these were converted both by the Greek and the Roman Church missionaries. Then when the Romans left, the Celts were overwhelmed by Saxons and Angles, Jutes and Danes in the fifth and sixth centuries, and as these latter took possession, the process of conversion had to start all over again. One of the major problems of missionaries to both Celts and Saxons was how to weed out the belief in lucky and in unlucky days. Perhaps they never accomplished it. The Roman missionaries called these superstitious beliefs "Egyptian days," yet they were flooded in their own city of Rome with exactly the same beliefs.

Edwin, King of Northumbria (585-633), was converted, and in order to build stone churches, brought stone masons over from Europe. Credit is usually given to Bede for building these in 680 A.D., but his stone churches were much later than Edwin's. A chronicler wrote of these early stone churches, "Then had ye wooden churches, but now wooden priests and stone churches." As quite a number of old stone churches had zodiacal signs carved on them, we are left guessing whether the stone masons decorated to suit their own fancy or according to instructions.

When Geoffrey[4] of Monmouth came to write the history of these early days of Christianity, he tells us that Edwin was so disturbed with attacks from the Danes and not knowing when the next would come, that he sent to Spain for an astrologer and Pelletus came over. Pelletus had been educated by Solomon, King of the Armoricans (Bretons). Geoffrey is also responsible for saying that "In King Arthur's reign, there subsisted at Caeleon in Glamorganshire a college of two hundred philosophers, who studied astronomy and other sciences; and who were particularly employed in watching the courses of the stars, and predicting events to the king from these observations." Evidently the belief in prophecy did not die out in spite of Christian teaching. Geoffrey of Monmouth was a Welsh Benedictine monk. It seems that about 1100 Walter, Archdeacon of Oxford, while travelling in Brittany, procured a very ancient chronicle of the kings of Early Britain, and gave this to Geoffrey to translate into Latin. Geoffrey finished it about 1139. As we do not have the original manuscript, we can choose to believe either that these astrological stories were in the original, or that the good churchman who afterwards became Bishop of St. Asaph's, inserted them himself.

Magic did not die out, in spite of Christian teachings. In the *Legacy of Israel*[5] this passage occurs:

> In the sixth and seventh centuries there were produced in the British Isles a very peculiar series of semi-magical documents, which scholars have entitled the Hisperic Literature. In these extraordinary compositions, though the language is Latin, the vocabulary is drawn from the most out-of-the-way sources. A few words artificially derived from Hebrew are included. These words may have been obtained from wandering Syrian or Byzantine travellers. There are also a few purely

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[4] Geoffrey of Monmouth, *Historia Britonum,* Book I, Ch. 16.

[5] *Legacy of Israel* (Oxford University Press).

magical formulae of about the ninth or tenth century that seem to exhibit Hebrew elements.

As regards the Hebrew words in English, we must realize that many of the early missionaries were of the Greek Church rather than of the Roman Church, and these missionaries seem to have inculcated certain Hebrew doctrines in the country. It may therefore be that some converts after learning a little Hebrew, reverted to pagan beliefs but inserted some of their Christian school learning.

On the other hand these semi-magical texts may have come about by what has been described as a Neo-Druidic heresy which crept into various parts of the country after the Romans left, in which there was an attempt to revive the old Druidism and rites in some new form, so as to combat Christianity. This Neo-Druidic heresy has been hotly denied by various scholars, but I give below what Herbert has to say in his *Essay on Neo-Druidism*:[6]

> Paulinus and Agrippa, by the conquest of Mona (Anglesey), the slaughter of Druids on that island, and the "cutting down of the groves that were sacred to their cruel superstitions," struck a fatal blow to their craft [*i.e.,* of the ancient Druids]. The three centuries that intervened between Vespasian and Honorius consigned to silence the Druidical system in the Roman provinces of Gaul and Britain—the religion of Rome first, and then that of Christ, being established in them, and the Latin language extensively prevalent. But in the very height of their Roman civilization, when the vicious empire was tottering, a pagan apostasy crept into Gaul and Britain, which ended in establishing in the latter country that Neo-Druidism to which the fables of Ambrosius and Arthur relate. A sort of magical association had grown up in the eastern parts of the Roman dominions founded upon the doctrines and mysteries of the Persian magi. These were the Mithraics, followers of the ineffable orgies of Mithras. Very early in the Christian era this pagan sect began in a measure to play the part of heretics, and under their name of Mithraics, imitated and parodied the rites of Christianity.

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[6] Quoted in *Taliesin* by D. W. Nash (London 1858).

They worshipped the Sun by his Persian title of Mithras, but pretended it was Christ they worshipped, and that Christ was the spirit of the Sun. These doctrines were introduced into Britain, a rich and civilized island, in which Christianity had been some time established, and Roman manners still longer. We therefore meet with a frequent dissimulation of that heathenism to which the authors of the system were addicted—a disinclination to call the demons of polytheism by their ancient and known titles, or to give them the rank of gods, and a feeble attempt to conciliate their mysteries with the Christian.

In considering this Mithraic heresy of Neo-Druidism (if it existed) we might note that some of the ancient art of Britain is very Persian in type, showing Persian influence. One can readily see that the Druidic beliefs must have lingered in the countryside of Britain long after they did in the towns, and that there would be for centuries a tendency to revert to old beliefs, just as in Rome itself, in the time of Julian the Apostate, there were people who reverted to the old Roman gods. There is, in their fables, one major difference between the Welsh and Irish concepts of the Druids. To a Welshman the name conjures up a vision of a great and wise teacher, honored, loved and respected, whereas with the Irish, throughout their folklore, there is a concept of a powerful magician, usually evil. It is of course probable that some of the least profitable of the old gnostic ideas of secret formulas and amulets came to Britain through contact with the Romans and the Greeks, and these were woven in with Neo-Druidism. Taliesin, the Welsh bard, has sometimes been accused of Neo-Druidism, but from evidence in his major poems, he appears to have been definitely Christian. He lived in Wales in the middle of the sixth century. There are many prophecies in his poems, but these may have been psychic ones and not astrological ones, yet he was acquainted with astrological prophecies, as his poem, "The Panegyric of Lludd the Great," reveals:

Astronomers are predicting
Misfortune in the land.

Taliesin is also conversant with the nine orders of angels, and with him we have a glimmer of a tenth sphere, which agrees with the tenfold theories of the Kabbalistic systems. But, whereas Dante, when he uses a tenfold Kabbalistic scheme, increases the nine realms by an extra one at the top—the Empyrean, Taliesin increases the nine spheres by an extra realm at the bottom to contain the souls of the saints, after or at, the end of the world (or in the Seventh Age of the world), and he envisions the souls of the redeemed speaking Hebrew, Greek and Latin. In his "Elegy on the Thousand Saints," he sings:—

> There are nine mystic troops of heaven,
> And the tenth, of the saints prepared for the Seventh Age . . .
> Language of Greek and Hebrew
> And Latin, men will be speaking. . . .

Now the nine orders of angels were systematized by Dionysius the Areopagite, St. Paul's convert, and his books were not supposed to be known in Europe until later when Alcuin (also from the North of England) translated them for the French King, yet here they are definitely mentioned by a Welsh poet of the sixth century, so evidently Greek writers were well known in the country. Whether the nine orders given by the Greek Dionysius are in line with the Greek nine muses, or whether they are Kabbalistic and Jewish is a moot matter. They were certainly used in the Kabbalistic scheme of the world, and they were related to the planetary scheme of Ptolemy.

The *Anglo Saxon Chronicle* gives us records of various eclipses and other heavenly phenomena. Who wrote the earliest sections we do not know. Some say the Chronicle was not started until Bede's time. Others say that Bede and his collaborators incorporated the work of earlier chroniclers, but redated these to conform with the new method of using Christ's birth date as the year 1 A.D. This Christian Era Calendar only came into being in 532 A.D., when it was introduced by Dionysius Exiguus. In some of the various MSS of the *Anglo Saxon Chronicle* there are discrepancies of a few years in date, due to the fact that Dionysius made a mistake.

But the important thing is that this Chronicle, which was mainly the work of monks, who inserted facts for each year, begins thus:

> A.D. 1 Octavianus reigned 56 winters; and in the 42nd year of his reign Christ was born. Then *three astrologers* from the East came to worship Christ.

Evidently the term "three astrologers" roused no irate feelings in the minds of the clergy in all the hundreds of years in which it passed through their hands, for the phrase was never erased. The *Anglo Saxon Chronicle* proves that its long chain of writers believed that eclipses, comets, etc., were heralds of far-reaching changes, mostly disastrous, or coincident with these changes. I give the years where the eclipses and other phenomena are mentioned and what the various monks who wrote the Chronicle had to say of the events in England which were concurrent with these events in the heavens:[7]

664 A.D.	Eclipse of the Sun, May 11. The King of Kent died . . . there was a great plague.
678 A.D.	The comet star in August shone every morning during three months like a sunbeam. Bishop Wilfred being driven out of his bishopric. . . .
729 A.D.	This year the comet star appeared and St. Egbert died at Iona. This year also died the Atheling Osward, and Osric was slain . . . also the King of Northumberland. This year Archbishop Bertwald died.
793 A.D.	Dreadful forewarnings over the land of the Northumbrians . . . immense sheets of lightning rushing through the air, and whirlwinds and fiery dragons flying across the firmament, followed by a great famine . . . and harrowing inroads of heathen men.

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[7] *Anglo Saxon Chronicle* (Everyman's Library).

800 A.D. This year was the Moon eclipsed at 8 in the evening on the 17th day before the calends of February . . . terrible conflict in which both commanders were slain.

806 A.D. This year was the Moon eclipsed on the first of September. Erdwulf, King of Northumbria was banished.

807 A.D. This year was the Sun eclipsed precisely at 11 in the morning on the 17th day before the calends of August.

827 A.D. This year was the Moon eclipsed on mid-winter's night; and King Alfred conquered the Mercian kingdom.

879 A.D. The same year assembled a band of pirates . . . the same year the Sun was eclipsed one hour of the day.

891 A.D. After Easter . . . appeared the star that men in book-Latin call *cometa*; some men say in English it may be termed "Hairy star" for that there standeth off from it a long gleam of light, whilom on one side, whilom on each.

979 A.D. This year was seen a bloody welkin oft times in likeness of a fire; and this was most apparent at midnight. . . . In this year was Ethelred consecrated King. . . .

1048 A.D. This year also there was an earthquake on the calends of May in many places . . . with very great loss of men and cattle all over England. . . . In the same year the enemy plundered Sandwich and the Isle of Wight and slew the best men there were. . . .

1066 A.D. This year died King Edward, and Harold the earl succeeded in the kingdom, and held it forty weeks and one day. And this year came William, and won England. And in this year Christ-Church [Canterbury] was burned. And this year appeared a comet on the 14th day before the calends of May.

During the lifetime of Bede it had become a practice among both the laity and the clergy to visit Rome. Gibbon in his *Decline and Fall of the Roman Empire* recalls that Bede wrote the prophecy of the Anglo Saxon pilgrims, who must have visited Rome before the year 735 A.D., which is close to the year of Bede's death. The prophecy runs:

> As long as the Coliseum stands, Rome shall stand; when the Coliseum falls, Rome will fall; and when Rome falls, the world will fall.

The Venerable Bede, born about 672 A.D. at Jarrow-on-Tyne, says that in his time students were still alive to whom Greek and Latin were as familiar as their native tongues. He also tells us "that Augustine started schools in Canterbury, but Theodore who had the See in 688 improved them, and he and his friend Adrian gave instruction not only in divinity but in astronomy, medicine, arithmetic, Greek and Latin. These two clerics were natives of Asia Minor and so spoke Greek fluently. Theodore was a Roman monk but originally a Greek priest, a native of Tarsus in Cilicia, skilled in the metrical art, astronomy, arithmetic, church music and the Greek and Latin languages." Bede goes on to say that Theodore brought a large library with him containing Greek and Latin books, also a copy of Josephus in Greek. Adrian who came with him was more acquainted with travelling. He was a Neapolitan monk, a native of Africa, "equally skilled in sacred and profane learning."

One of their pupils was Ealdhelm or Aldheim (c. 640–709), who later became Bishop of Malmesbury. He was a great builder of churches. One of his churches in Wiltshire still survives. Craik in his *Manual of English Literature*[8] says of him:

> Ealdhelm was of the stock of the Kings of Wessex, and was initiated into Greek and Latin at the School of Kent, presided over by Abbot Adrian, who, like his friend Theodore, appears to have been a native of Asia Minor, so that Greek was his native tongue. We are assured by one of his biographers that Ealdhelm could speak and write Greek like a native of Greece. He early associated himself with the Monastic brotherhood of Malmesbury. Among his studies are mentioned the Roman law, the rules of Latin prosody, arithmetic, astronomy and *astrology*. Warton says, "His writings are chiefly theological, but he has likewise left Latin verse, treatises on arithmetic, *astrology*, rhetoric and logic." Evidently all these treatises were meant to be taught in Ealdhelm's schools. Then about the same time, so Bede says, Benedict came over from Rome with a great library of Greek and Latin books. He settled in the North of England. Benedict was succeeded by Ceol-

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[8] Craik, *Manual of English Literature* (Everyman's Library).

frid, who added to the library a "book of cosmography wonderfully enriched with curious workmanship."

Alcuin (735-804), ambassador of King Offa to the Emperor Charlemagne, and finally a friend of Charlemagne, was one of the most remarkable men of the North. He was born the same year that Bede died and went to school in York, where a famous school had existed from Roman times,—and probably before. It was in York that the Culdees of England had their headquarters and they seem to have been acquainted with much curious knowledge. Alcuin tells us very clearly in one of his poems what he learned in his school days:

The harmony of the sky
the labor of the Sun and Moon
the five zones
the seven wandering planets
the laws, rising and setting of the stars
the aerial motion of the seas
earthquakes
the nature of man, cattle, birds and wild beasts
the sacred Scriptures
grammar
rhetoric
poetry

Certainly an astronomical program. No wonder that one of his biographers remarks, "Alcuin was not quite free from speculative opinions." His opinions were possibly somewhat Neo-Platonic. The fame of Alcuin spread far and wide, and as Charlemagne conferred with his ambassador on various matters other than politics, particularly on astronomy which was the emperor's hobby, they discussed the schools which Charlemagne intended to found in his dominions. Finally, Alcuin was asked in 782 to take charge of these new schools. The friendship grew steadily and a very wonderful and genial spirit of camaraderie was established.

In one of his letters Alcuin tells the emperor what he taught his students at St. Martin's School, Paris:[9]

> To some I administer the honey of the sacred writings; others I try to inebriate with the wine of the sacred classics. I begin the nourishment of some with subtlety. I strive to illuminate many *by the arrangement of the stars,* as from the painted roof of a lofty palace.

I might mention here that Charlemagne and the Caliph Haroun Al Raschid made a treaty of friendship, and the Caliph, knowing that Alcuin was teaching astronomy, sent Charlemagne the gift of a beautiful astrolabe in order that observations might proceed more accurately in Alcuin's schools. Thus we see that it is most probable that Alcuin used this astrolabe, and the use of it became quite generally known throughout Europe at this early date, and did not have to wait until the eleventh century and later. Al Raschid sent not only an astrolabe, but he sent scholars and books too, in order that this instrument might be properly understood and put to use. Warton[10] says of these scholars:

> They brought with them their books, which Charlemagne, Emperor of France and Germany, commanded to be translated from Arabic into Latin, and which, by the care and encouragement of that liberal prince, being quickly disseminated over his extensive dominions, soon became familiar to the western world. . . . From this fountain the infatuations of astrology took possession of the Middle Ages, and were continued even to modern times.

Charlemagne could speak and write Latin as well as his own Flemish, but of his Greek, Eginhard his biographer relates, "he understood it better than he could pronounce it." Warton continues:

> It is certain, that about the close of the ninth century, polite letters, together with the sciences, began in some degree to be studied in Italy, France and Germany. Charlemagne, whose munificence and activity in propagandizing the Arabian literature, has already been mentioned,

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[9] Craik, *Manual of English Literature* (Everyman's Library).

[10] Thomas Warton, *Dissertation on the Introduction of Learning into Europe.* (Warton uses Cuspinian's *De Caesaribus,* p. 419, as his authority for this statement.)

founded the universities of Bononia, Pavia, Paris and Ofnaburgh. Charles the Bald seconded the salutary endeavors of Charlemagne. Lothaire, the brother of the latter, erected schools in eight principal cities of Italy.

Gibbon, like all the Victorians and various historians who have not delved into these matters, does not appreciate sufficiently the learning of the period that has been called the Dark Ages. He records what the Greeks and Romans knew and taught, but rarely what the "barbarians" were clamoring to know. Speaking of the knowledge of the period he says: "The grammar and logic and astronomy of the times were only cultivated as the handmaids of superstition." Did Gibbon mean that in his researches into the period he found that astronomical knowledge was almost always used to further astrology? The schools of Charlemagne did not survive the Emperor, but the impetus to learning did not entirely die out. One of Charlemagne's grandsons was Charles the Bald of France, who received that portion of the Empire called the Spanish Mark, and Aquitania. He wanted a tutor for himself and for his palace school. He heard of John Scot, or Scotus (800–884), generally called Erigena, and invited him to the court. Again a wonderful friendship grew up between the king and tutor, and the king protected "his little friend" in everything, for Erigena was extremely small, but very witty and amusing. Erigena had learned Greek thoroughly in his British school, and had already completed a translation of the works of the Greek Dionysius the Areopagite (whom we mentioned previously) when he went to France. Thus obviously these writings of Dionysius were known in England long before they were introduced into France. It was this translation that brought him to the notice of the king. It seems that Charles' father, Louis the Pious, had been presented by the Byzantine Emperor with a diplomatic present of a manuscript of the writings of Dionysius, and no one in France had known enough Greek to translate it, thus Charles hailed with joy a man who could translate Greek and compare his (Erigena's) own copy with the Byzantine manuscript. However much historians may talk about the Dark Ages, we find that any time the Byzantine emperors sent a valuable codex or manuscript to a Western king, this was received with the greatest joy, and kings moved heaven and earth to have the best use made of it. National grievances were immediately set aside and made of no consequence if a learned man could be found in any nation who would make its contents available. Dionysius was a learned Greek converted by St. Paul (see Acts XVII, 34) and is said to have been installed as first Bishop of Athens by St. Paul himself. Previously he had studied in the schools of Athens and at Heliopolis in Egypt. It is said that when he observed in Egypt the eclipse of the Sun which coincided with Christ's crucifixion, he exclaimed, "Either God Himself is suffering, or He sympathizes with someone who is suffering." Legend says that after his conversion he came westwards and settled in France, where his name was shortened to Denis. He became Bishop of Paris and was put to death by the Romans. We can then imagine the excitement of all France when they were given by the king an authentic translation of their own patron saint's writings. But trouble started because of this very excitement. Many of the religious teachers of other nations had never heard of any writings of Dionysius and openly proclaimed that they were frauds. Cyril of Alexandria had never mentioned them and neither had Athanasius, so they must be Neo-Platonic imaginations of the third century. Erigena, then, with his translations of *The Celestial Hierarchy, The Sacred Name of God,* and *On Mystical Theology,* became a storm center of religious controversy, and Charles the Bald had great trouble in protecting him. The teaching, however, on the nine orders of angels was believed by the people. It was the greater clerics who made accusations of heresy against Erigena for translating them and bringing Eastern mysticism into Europe. Charles died in 877 A.D., and Erigena returned to England. He is said to have been stabbed to death at the school belonging to the monastery of Malmesbury, by a rabid student who evidently considered that it was right to put such a heretic to death. Among other things that

Erigena wrote was *De Divina Praedestinatione,* or Concerning Divine Predestination. He is credited with learning Arabic and Chaldean and visiting Athens. From his life and Alcuin's we see that Arabic knowledge came to Europe between 782 and 884 A.D.

King Alfred's stepmother was a daughter of Charles the Bald, and Alfred (871-901) appears to have studied most of the school subjects of the day. He instituted schools and revived the *Anglo-Saxon Chronicle,* which had fallen into disuse. Asser, one of his helpers, who came from Wales, says, "Alfred searched for scholars like the bee looking for honey. He sent gifts and an embassy to the Archbishop of Rheims to ask for Fulco, the scholar, to come to England. Every noble or man of substance had to attend school or send a substitute." Alfred himself translated Boethius and from this time on the works of Boethius were standard textbooks in all English schools until the period of the Renaissance. Asser too, in his Life of Alfred, mentions that the king brought over "cunning artificers in goldsmith's work." If we may judge by what is called "Alfred's jewel," they were Byzantine goldsmiths. There was thus a definite step forward in all fields of learning, and the schools of Alfred taught the same subjects as had been taught by Alcuin in Charlemagne's schools, that is, a continuation of what had been taught in Bede's schools, which included a natural astrology that took account of weather, but did not stress the predictive side of astrology too much. Confirming this thought, Warton tells us that Alfred's teachers "gave instruction in the fashionable sciences of logic, astronomy, arithmetic, geometry, etc." Also, close to the tenth century we find calendars in England. They were farmers' guides, containing phases of the moon, etc., the right times for planting and harvesting by the moon, lucky and unlucky days, etc. These do not show that the people of England were astrologers, but they tend to show that the compilers of these almanacs knew something of astrology, and if some of them knew only a little, there were possibly others who knew a great deal.

In the tenth century, too, we find that Euclid was introduced, or re-introduced, into England, by various masons who came to build churches:

> The clerk Euclid in this wise did found
> The craft of Geometry in Egypt's land.
> In Egypt he taught it full wide,
> In divers lands on every side. . . .
>
> This craft came to England, let me say,
> In time of good King Athelstan's day.[11]

It is important to note that in all this early period we have records of drawings, and carvings in stone, of the zodiac—many on churches. Several churches in Kent long before 1066 had this zodiacal ornamentation. The old Cathedral of Canterbury was burnt down in 1067, but the new one had zodiacal figures just as the old one did. The old Abbey of Glastonbury in Somerset is said to have had a zodiac on its floor. The Harleian MS in the British Museum shows a drawing of the eighth century by the monk Gerugius. In it is a fish goat for Capricorn, a man with scales for Libra, Gemini with a spear and club, and a winged Virgo carrying a lily and palm. In the Harleian MS for the ninth century there is a planisphere showing Aquarius as Ganymede, Jove's cupbearer. Also, in Craik's *Manual of English Literature*[12] I find the following:

In the History attributed to Ingulphus[13] (by Peter of Blois) is the following description of a sort of scheme or representation of the planetary system called the Nadir, which is stated to have been destroyed when the abbey of Croyland was burned in 1091:

"We then lost a most beautiful and precious table, fabricated of different kinds of metals, according to the variety of the stars and heavenly signs. Saturn was of copper, Jupiter of gold, Mars of iron, the Sun of latten, Mercury of amber, Venus of tin and the Moon of silver. The eyes were charmed, as well as the mind instructed, by beholding the colure circles, with the zodiac and all its signs formed with wonderful art, of metals and precious stones, according to their several natures, forms, figures and colors. It was the most admired and celebrated Nadir in all England." The last words seem to imply that such tables were then not uncommon. This one it is stated had been presented to a former abbot of Croyland by a King of France.

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[11] Halliwell Poem (1390) transcribed from earlier ones. Athelstan (925–940).
[12] G. L. Craik, *Manual of English Literature* (Everyman's Library).
[13] Compiled from ancient MS in the Abbey of Croyland.

There was a great thirst for learning in England long before the time of the Norman Conquest, and the teachings of Alcuin, Alfred and Erigena never died out.

The schools which the Normans founded in England were attended not merely by Normans but by Anglo-Saxons, too, who were eager to take advantage of them and to continue with their studies, not start them.

Also, on the continent in the pre-Norman period there was a Spanish translation of an Arabic astrological book by Alcandrius. I have occasionally run across a reference to Alcandrius in books of quite recent centuries, but had never been able to trace the author. In the *Legacy of Israel* [14] his work is referred to in these words:

> From a later period in the tenth century comes to us the very remarkable Latin document called the *Mathematica Alcandrii.* This curious work, which exists complete in only a single manuscript, is devoted to astrology of a very complex type. The name Alcandrius is probably a form of Alexander. The author of this work writes a number of words in Hebrew script, and the Hebrew names of the planets and constellations are familiar to him. He uses too the common Rabbinical habit of combining initial letters into symbolic words. His astrological system is largely based on the numerical values of the letters of the Hebrew alphabet. These numerical values were of constant interest to Cabalistic Hebrew writers.

We have no record that this book was in England in the tenth century, but it may have been among the books of the learned Jews and other scholars who came to England soon after the Norman Conquest.

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[14] *Legacy of Israel* (Oxford University Press).

Chapter 15

EARLY MEDIAEVAL ASTROLOGY

Astrology entered into the councils of Princes; it guided the policy of nations, and ruled the daily actions of individuals. All this is attested by the records of every nation which has a history, and by none more fully than by those of England. Yet, with these striking facts before their eyes, the present generation seem never, until now, to have enquired on what basis this belief of their forefathers was established, nor by what authority the delusion (if it was one), could have been for so many ages supported. Among a thousand people who now treat of Astrology with supercilious ridicule, there is scarcely one who knows distinctly what it is he laughs at, or on what plea his ancestors should stand excused for having in their day contemplated with respect the unfortunate object of modern derision.

J. M. Ashmand, Preface to *Ptolemy's Tetrabiblos.*

William the Conqueror had his astrologer. If one did not realize that astrology was being taught in almost every school of the day, one might wonder where William obtained his astrologer. We never hear of any king finding any difficulty in obtaining a good astrologer. Who taught them all? Whatever astrologer set the date for the coronation, and practically all coronations were astrologically timed, was certainly a marvellous student of the art of "election,"—high noon, Christmas Day, 1066 A.D.—for the kingdom still exists.

William, on the whole, was interested in all kinds of learning. Apparently he was an intellectually tolerant man in an age when intolerance was esteemed a virtue. He encouraged the growth of schools both in England and in Normandy. All his own children were well educated. In fact, his son Henry Beauclerk was so proficient that he earned the name Beau-clerk. Warton, in his

Dissertation on the Introduction of Learning into England, wrote: "The king himself gave no small countenance to the clergy in sending his son Henry to the Abbey of Abingdon, where he was initiated into the sciences under the care of Abbot Grambald, and Farritius, a physician of Oxford."

William also tolerated the Jews, and after the conquest of England, he allowed many Jews from Rouen and other places to settle in London, Oxford, Cambridge, Bury, Huntingdon, Stamford, Lincoln, Lynn, Norwich, etc., and for almost two hundred years there was no persecution of Jews. Records at Oxford show that they attended the schools, and that some of their rabbis taught in the various schools which preceded the university. In this way there seems to have grown up an interest among the clergy and schoolmasters in Hebrew literature. Now as we have seen previously, the Jews had been partakers of, and were purveyors of, the Arabic and Moorish revival of learning and their scientific studies, and undoubtedly many of the books which these Jewish rabbis brought with them contained some of the new learning, besides their Kabbalistic studies. In any case when the order was given in Richard I's time to drive them out of England, we read of terrific competition among the abbots and clerics to buy their books. We read, too, of Roger Bacon having access to some of these books, and as he was a friar, we must suppose that various other friars of the time were also interested. It is somewhat amazing to realize how many of the early English clerics knew Hebrew and how one of them compiled a Hebrew lexicon. The writings of Avicebron, sometimes called Ibn Gabirol (1021–1058) may have been among the books studied during the Norman settlement, or even previously. Avicebron wrote *The Fountain of Life,* which in the main, follows some of the Neo-Platonic views. Avicebron was a Spanish Jew and not an Arab, though his book had originally been written in Arabic. His teachings, we read in the *Legacy of Israel,*[1] had great influence on the Franciscans—"The universe is to be explained not by a study of the nature of things, but by a knowledge of the principles which have given them being." We shall see later how this sentence became a storm center. The statement, however, gives us in brief what an astrologer tries to do—to find the principle underneath the action or matter, hence Avicebron's book became popular among astrologers.

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[1] *Legacy of Israel* (Oxford University Press).

Modern researchers in astrology find great interest in the "Magic Squares" which Avicebron assigned to the planets.

We might ask what was taught in the schools of the period. Since William the Conqueror's clergy were on the whole imported from France, we might look to France as the model of English schools, remembering, however, that John Erigena had helped set the pattern of the French ones, and it is inconceivable that he had not had some part in modelling various English ones too. During the reigns of the early Norman kings, Abelard (1079–1142) was the chief teacher at Paris (School of Chartres). John of Salisbury, a renowned English scholar, who later became secretary first to Theobald Archbishop of Canterbury and then to Archbishop Thomas à Becket, went to study under him. John wrote *Policraticus; On the Trifles of the Courtiers and the Tracks of the Philosophers,* in eight books. In his first, he speaks of the many vanities of the courtiers such as hunting, music, dice, soothsaying and astrology, but in the second book he argues that astrology is really a worthy art. Also John of Salisbury tells us in his *Metalogicus* that the Trivium and Quadrivium[2] were ancient studies in his school days. These two groups of studies, he goes on to say, "unfold all the secrets of nature." As we have seen before, the seven subjects of the trivium and quadrivium were ancient in Alcuin's day. They were ancient in the time of Isaac Judaeus, who was Master of the Seven Sciences. They were still being studied in Dante's day and for centuries after that—and they included astrology.

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[2] See Appendix VIII.

Some time during the reign of William the Conqueror there was born at Bath in the West of England, Adelard (Aethelhard), one of the most renowned of all the scientists of the Norman period. After learning all he could in England he went to Tours and to Laon. For a while he taught in Laon, then he travelled eastward to Greece, then to Asia Minor and finally to Bagdad. He came home when Henry I (Beauclerk) was king, but even as he travelled home he studied and all the way along the route he taught what he had learned in the East. On his arrival home he wrote *Questiones Naturales,* or Questions on Nature. Henry Morley[3] tells us how he came to write this. Adelard's nephew, "interested also in the causes of things, asked Adelard for an account of his Arabian studies, and the book was his answer. . . . He proposed and discussed sixty-seven Questions on Nature, beginning with the grass, and rising to the stars. . . . Adelard of Bath also wrote on the Abacus and on the Astrolabe, translated an Arabic book upon astronomy, and was the first bringer of Euclid into England by a translation which remained the textbook of succeeding mathematicians."

If we refer to our chapter on Early Britain, we shall see that Morley was not quite correct in saying that Adelard first brought Euclid into England. Euclid had been known there for some hundreds of years. Boethius had given out the first four books of it, and these were known wherever Boethius was read. What Adelard did was to find a number of the later Euclid books in Arabic libraries, and realizing their value, he brought these to England and made Latin translations of them. He was both an astrologer and an astronomer. Evidently the Jupiter-Saturn conjunctions fascinated him, for he translated Albumazar's *De Conjunctionibus* and continued with no less than four translations of other Arabic astrologers. It would appear to be common sense that he would not go to this trouble unless some one besides himself wanted to know what Albumazar and others had to say on astrology. He also translated into Latin Al Khwarazim's astronomical tables and treatise, the latter under the title of *Meridian Arin Central India.* This shows us how the "arin" theory first came into general use in England and in Europe, and in the fifteenth century finally reached the hands of Christopher Columbus, for when men checked on these early translators, we find Cardinal d'Ailly making a translation of Al Khwarazim's astronomical treatises in order that he might be sure that these early translators were correct in what they wrote. Adelard's philosophy of life was contained in his *De Eodem et Diverso* (Concerning Identity and Difference), a treatise which we might term a forerunner of our modern concepts of evolution and species.

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[3] Henry Morley, *First Sketch of English Literature* (Cassell, Petter & Galpin).

It may have been Adelard who brought or recommended to the king, the physician-astrologer Petrus Alphonsi (1062-1110), a converted Jew born in Aragon and, on his conversion made godson and physician to Alphonso VI of Castile. Petrus was a great Arabic student, who not only collected thirty or more folk stories[4] of the Arabs and translated them into English when he arrived in England, but he collected astrolabes and knew how to use them. He even learned how to make them himself, and he was inventive enough to think of other instruments he could make. His presence in England was quite an incentive to study. He wrote on astronomy and on medicine. He published star tables and he practised medicine and taught. His book *De Morte et Vita* (On Life and Death) is medico-astrological in scope. Twenty years after his death his work was so highly valued in England that Walcher, Prior of Malvern in the West of England, made English translations of all his books that could be obtained. We thus see at what an early date, the men of Spain came to work and to teach in England, and we might note that it must have been the usual thing for Spanish professors to be at the schools of Oxford, for from time immemorial down to the present, the title of "Don" is given to Oxford professors who "hold a chair."

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[4] See *Specimens of Early English Metrical Romances* by Geo. Ellis, Ed. by J. O. Halliwell (Bohn, 1848).

Petrus was no doubt familiar with the work of the Spanish-Arab Arzachel of Cordova (1029–1087), the well known astrologer who made the best astrolabes and the best known astronomical tables of the eleventh century. These tables were translated later by Gerard of Cremona, and John of Sicilia wrote a Commentary on them. As these tables of Arzachel were later superseded in accuracy by the Alonzine Tables, it is interesting to note that Dr. John Dee had copies of both in his library, probably in order to check on earlier horoscopes, for Dee made his own star observations, as well as owning later tables.

Alpetragius,[5] who was contemporary with Petrus and Arzachel, had his own views on how the heavens moved. He was greatly criticized in the next century by a Jewish writer named Gersonides, who came nearer to the Copernican beliefs than most of the astronomers of the period, and John Dee, who was one of the first men in England to adopt the Copernican views, also had copies of Alpetragius and of Gersonides in his library, showing that he studied all viewpoints, and did not blindly accept Copernicus.

Peter of Blois [6] studied theology under John of Salisbury. He later became preceptor to William II of Sicily and then to Henry II of the same country. Later, he became secretary to Archbishop Theobald of Canterbury. We are greatly indebted to Peter for defining very precisely what was learned in the mathematical studies of the quadrivium: [7]

> Mathematicians are those who, from the positions of the stars, the aspect of the firmament, and the motions of the planets, *discover things that are to come.*

While we are on the subject of terms, we might note that the term "grammarian" (gramerie in Chaucer) was also used to denote a man of occult powers. The word "philosopher" also meant an astrologer down to the days of Kepler and beyond, and the terms "astronomy" and "astrology" were interchangeable. Evidently the astrologers were learned in all the arts and sciences, for they were called "mathematicians" too.

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[5] Author of *De Verificatione Motuum Coelestium.*

[6] See *Manual of English Literature* by G. L. Craik (Everyman's Library).

[7] See Appendix VIII.

Peter of Blois was the author of the *Life of Ingulphus,* an English abbot (d. 1109) who travelled as far as Jerusalem in quest of knowledge and who had evidently become interested in astrology. We mentioned the astrological table in our section on Early England. There were broadminded and narrowminded clerics in those days. To my mind the most priceless proof of the interest of some of them in astrology is the fact that Christian burial was refused to the Archbishop of York, Gerald, who died in 1108. It was refused because after his death the monks found a copy of the astrological works of Julius Firmicus Maternus under his pillow! Evidently the interest in astrology far back in Bede's day had not died out in York. Also there were other clerics who did not read in bed, so their names do not come down to us. The truth is that so great was the interest that scores of translators sprang up all over Europe, and scores of young men travelled to every place they could where there was a school that taught "Arabic" arts.

William of Conches (1080-1154) wrote *De Philosophia Mundi,* in which he gives his theories of the world. He was very well acquainted with Maternus and also with Ptolemy's *Tetrabiblos.*

Another teacher of the day, Alanus ab Insulis, called Doctor Universalis, read Albumazar and mentioned him as his major authority.

Then there was Alexander Neckham, Abbot of Cirencester (1157–c. 1217), foster brother to King Richard I, said to have been born the same night as Richard. He studied the Arabic masters, and was well versed in Algazel and in Isaac Judaeus. He wrote *De Natura Rerum* (Concerning the Nature of Things). He deals with all the sciences of the day including astronomy and astrology, and was apparently interested in medicine also. To him Alfred the Englishman, one of the translators of the time, dedicated a book, *On the Motion of the Heart,* said to be a compilation of Arabic medical books. A book on the motion of the heart would today be considered safe, theologically speaking, but not so in those days. Writers on medicine did not confine themselves to the physical heart merely. The heart, according to the Kabbalists and Neo-Platonists, was a center of motion, a miracle only comparable with the perpetual motion of the Sun, hence Alfred gathered into his treatise all that he could find on Neo-Platonic views.

And Richard Cœur de Lion (1157-1199) received a good education and delved into astrology. He wrote what has been called "something on Astrology," a book which is recorded but not extant.

The critics of astrology, such as Marbodus, Bishop of Rennes, might rage against astrology, but they could not stop the interest. Teachers from the School of Chartres went travelling in Spain even two years before the death of William the Conqueror, for Spain was opened up to the Christians in 1095. Among later travellers were Robert of Retines an Englishman, Herman of Dalmatia, who translated Albumazar's *Introductorium* about 1143, and Plato de Tivoli, who translated Ptolemy's *Tetrabiblos.* Thus, we see that very soon after the fall of Toledo, nearly all the significant books of the Arabs on astrology and astronomy were readily available in Latin, the universal language of scholars in nearly every country of Europe at that time.

Robert of Retines is sometimes called Robert de Ketene, or Ketensis, or Robert the Englishman. He translated the *Koran* and Al Kindi's *De Judiciis Astrorum* in 1147. A manuscript in Lilly's Library (see Appendix XI), dated 1272, is evidently a copy of this. Robert of Retines may also be the same person as Robert of Chester, or Robertus Cestrensis, who translated Geber's *Composition of Alchemy* and Albategnius' *Tables,* calculating the latter for the meridian of London.

More important was John de Luna Hispalensis who wrote *Epitome Totius Astrologiae,* a book that retained its popularity down to the day of William Lilly in Stuart times. Book Four of the *Epitome* is devoted to "Elections," that is, to the astrological art of setting a particular time to begin things. He also had a chapter on "Journeys," giving the method of choosing a time when one might start a journey and avoid mishaps. Chaucer is said to have used this textbook. John translated the *Centiloquy* of Ptolemy, Albumazar's *Flores Astrologiae* and his *Conjunctionibus,* also books of Alchabitius and Messahala—the latter also used by Chaucer. John Hispalensis is sometimes confused with Avendeath (Ibn Daud or Abraham ibn David), a great astronomer of Toledo, but the two were totally different people.

Avendeath wrote an alchemical tract *De Quinque Universalibus.* This gave his theories on the "quintessence," or elixir, the world of flux in which transmutation of elements could take place. Avendeath is said to have translated more books on astronomy and alchemy than any other translator of the period. He also translated into Latin a work which percolated throughout the entire continent of Europe during the Middle Ages, the *Secretum Secretorum,* which was variously ascribed to different authors. Some said it was written by a Spanish queen. Some say it was written by Albertus Magnus, while others trace its origin to Aristotle. In any case, mediaeval writers generally believed that Aristotle wrote it. John Lydgate made an English translation of it which Ashmole published among his alchemical tracts, in his *Chemicum Britannicum.*

Henry II of England (1154–1189) was most interested in astrology. Popular fancy even gave him a sorceress for wife. In the legends of his son Richard I, Henry is said to have married a beautiful lady from a far country. All went well, and Richard was conceived of this union, until some of the nobles noticed that the queen did not attend church,—a suspicious matter in those days. They demanded she attend and take communion. She arrived at the church but when it came time to take communion she disappeared through the roof of the church. Only such a sorceress, in popular fancy, could account for Richard's strange learning.

Actually his mother was Eleanor of Aquitaine, but legend could not think she was extraordinary enough to have such an extraordinary son. Henry II was the son of Geoffrey Plantagenet, Count of Anjou, a great student of astrology. Geoffrey's education had been supervised by his uncle Robert, Duke of Gloucester, himself one of the men of learning of the period, who first saw the wisdom of bringing all that the "Arabs" knew into Europe, and Robert knew enough "Arabic" learning to make his own astronomical tables. He was the patron and friend of both Geoffrey of Monmouth and William of Malmesbury, both of whom dedicated their historical chronicles to him. From all this, one can imagine that when Abenezra was invited to lecture in England during Henry II's reign there were plenty of learned men to greet him, and confer with him.

Abenezra, sometimes called Avenard (1092-1167), was born in Toledo. His Jewish name was Abraham ben Meir-ibn Ezra. He seems to have caught the popular fancy of Europe with an enduring fame, for from his own time down to the time when Robert Browning used him in one of his dramatic poems, his books have been read and his personality has survived. Master of all kinds of languages, Hebrew, Spanish, Arabic, Aramaic and Latin, he was a mathematician, astronomer, astrologer and poet. And yet he knew medicine too. He wrote many treatises on astrology. His *De Nativitatibus* was popular in his own time and for centuries later. One edition came out in 1485 and one in 1537. He also wrote *Critical Days,* showing physicians how to calculate these astrologically. But Abenezra did not keep himself shut up in Toledo all his days. He loved travel so much that he has been called "a literary vagabond." And as he travelled he wrote poetry and he taught. His visit to England occurred in 1158 and he gave lectures in London, and possibly at Oxford too. After this he lectured in France, Provençe, Lombardy, North Africa, Egypt, Palestine, Italy, Mantua and Rome. In his old age he settled down to make his permanent home in the city of Rome where many students gathered around him. There may or may not have been a school of astrology in Rome at this time, but the University of Bologna had had a chair of astrology since 1125 A.D.

Abenezra had a very delightful sense of humor and loved to make poems on all kinds of topics. Let us see what he says of his own horoscope. He calls it "On My Tough Luck:"

The planets and stars from their courses
  Swerved when I first saw the light;
Were I a dealer in candles
  The Sun would then shine all night.

I strive to succeed but I cannot,
  For the spheres of the heavens oppose;
If making of shrouds were my trade,
  No one would die,—I suppose!

In his medical books Abenezra gives the various herbs under their planetary influences. It was from textbooks such as these of Abenezra that Nicholas Culpepper and others derived their understanding of herbs, though many of Culpepper's sources were earlier than Abenezra.

Abenragel (1116-1152) was an Arab who wrote *Liber Completus in Judiciis Astrorum*. He evidently had some Hindu teacher, for he mentions the Twenty-Eight Lunar Mansions, or Asterisms. In any circle of 360 degress, there are 28 mansions of the Moon, thus each mansion will be one twenty-eighth part, or twelve and six-sevenths degrees in each. In modern astrology these asterisms are used by E. H. Bailly and others in Pre-Natal Astrology. They mark alternate sex points along the zodiac. Abenragel applied the lunar mansions to Horary Astrology, that is, to specific questions of the hour. After his time any astrologer who used these 28 mansions was considered to be a most unholy magician. From this I would deduce that his answers were uncannily correct. His book was translated into Latin in 1256. Both Dr. Dee and William Lilly used this textbook, and certainly Lilly was a wizard on Horary Astrology. As far as I know, no modern textbook has used lunar mansions on horary work. The book of John Hispalensis on Horary Astrology was not based on lunar mansions but rather on Messahala's methods, which have been followed by Zael, Chaucer and our modern writers Simmonite and Broughton. Horary Astrology is sometimes considered to be inferior to Judicial Astrology, and sometimes to be mere superstition. The present European scientific schools refuse to believe in it at all. As a matter of fact, Horary Astrology is one of the most difficult arts, taxing the astrologer's accuracy of judgment to a very marked degree. Some astrologers can never make correct horary judgments for the simple reason that they (the astrologers) are too diffuse. They hate to say yes or no to questions which must be answered that way, and they hate to give time.

For the benefit of the Jews in France, Abraham bar Hiyya Hanasi (d. 1136), sometimes known as Savasodora, wrote an Encyclopaedia of astronomy, geometry and arithmetic. He wrote out various astronomical data entitled *Calculations of the Course of the Stars,* and *The Tables of the Prince,* all of which he applied to his astrological work. He is said to have calculated the date of the destruction of Islam. I do not know what date he set. He translated five Arabic books into Hebrew and some into Latin. Hiyya worked in conjunction with another of the great translators of the period, Plato de Tivoli, the Italian who flourished about 1140, who settled in Barcelona and translated Ptolemy's *Tetrabiblos.* Another Jew who translated Spanish-Arabic books into Hebrew was Joseph ben Isaac Kimbi (1105–1170).

Daniel Merlac, who lived during the reigns of Henry II and Richard I, went to Toledo in 1185. He brought back to England many volumes of Arabian philosophy and translated them. Apparently there was no lack of teachers or of translators, and certainly if we read the early records of the schools and universities, students were not numbered by the hundreds but by the thousands, and most of them were so poor that the citizens were inclined to complain of having to feed them.

Maimonides was born March 13, 1135, in Cordova, where his father was well known for his researches in mathematics and astronomy. Due to persecution, the family had to leave Spain. They wandered all over North Africa and the Near East. Maimonides studied medicine and all the various subjects of Arabic learning and finally became physician-astrologer to the mighty Saladin. Richard Cœur de Lion offered him a similar position in England, and it was probably after looking into his own horoscope that Maimonides refused, for persecution against the Jews broke out during Richard's reign. In 1194 Maimonides was asked by the learned Jews of Marseilles what he thought about astrology. Maimonides replied, praising real astrology and denouncing fakes. He believed that planetary intelligences controlled all the seven planets. He said that the Primum Mobile was to the world, in causing motion, what the heart [8] was to the human body, and he developed this idea in his philosophy. We saw, in our chapter on the *Sephir Yetzireh,* that this was an ancient thought. Maimonides tried to make it clear that neither the heart nor the Primum Mobile is God, neither is action in itself God, though it may be an expression or attribute of God.

In the early thirteenth century a famous Englishman, John of Hollywood (c. 1200–1256) demands our attention. He was born in Hollywood, near Halifax, Yorkshire, studied at Oxford and then went to Paris, first to study and then to teach. The students changed his name to Sacrobosco, which was a Latinization of Holy-wood. Under this name, Sacrobosco, he became the best known mathematician of all Europe. Among the books written by him was *De Sphaera Mundi,* which was among the source books used by Geoffrey Chaucer in his *Treatise on the Astrolabe.* As a matter of fact, Sacrobosco's book reigned supreme in every English school and university as a major textbook for four centuries or more after his death. There were 64 editions of his book published in Latin before 1647. The *British Museum Catalogue* lists 50 editions, and these do not include editions of translations into French, German, Italian and Spanish. Sacrobosco wrote a more difficult textbook on the sphere entitled *Super Tractatum de Sphaera*. He also wrote on Algorisms.

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[8] See Appendix V.

Let us now turn to one of the most remarkable of all the early translators who preceded the group which surrounded the Emperor Frederick II. Gerard of Cremona was born in Italy in 1114 and lived until 1187. He and the men who worked with him are credited with translating into Latin no less than eighty books from Arabic and Greek. It was Gerard who stole the *Canon* of Avicenna and gave his works to Europe. He also gave out the tables of Arzachel, whom we have mentioned previously. It was indeed a great age of translation. Through the work of Gerard and his assistant, together with that of previous translators, the science of the Greeks and Arabs became a living thing in Europe in early mediaeval days. Reviewing the books available, there were those of Hippocrates, Galen, Hunayn, Isaac Judaeus, Geber, Ptolemy, Al Kindi, Albumazar, Messahala, Alfraganus, Avicenna, and many others, so that students did not need any more to take perilous journeys to Arabia and to Spain. And yet we must not forget that there were many scholars and churchmen who resisted this new avalanche of learning. In 1215 the Papal Legate forbade the students at Paris [9] to read Aristotle, either in Greek or Latin, or any abridgments of his books, and in 1231 Pope Gregory IX ordered reading of them to be suspended [10] until they were corrected.

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[9] See *Manual of English Literature,* G. L. Craik, p. 44 (Everyman's Library).

[10] Compare Chapter 19, where Ramus was suspended at the University of Paris in the sixteenth century for not wanting to teach Aristotle.

Chapter 16

THE LATER MEDIAEVAL PERIOD

> *It only shows the narrow-mindedness of some modern writers, and their ignorance of the historical development of man's conception of nature, when they, on every occasion, sneer at the greatest men of former ages for their belief in astrology.*
>
> *Life of Tycho Brahe by* J. L. E. Dreyer, F.R.A.S.,
> Director of the Armagh Observatory (1890).

The Emperor Frederick II (1194–1250) was taught in his youth by a Scotchman of great renown,—Michael Scot. Frederick was King of Sicily and also of Naples. He allowed colonies of Saracens to settle in both kingdoms. Some of these people were merely tillers of the soil but others were men of vast scientific interests. Frederick was not the first King of Sicily to have astrologers at his court. In the *Legacy of Israel* there is a reproduction of an old drawing showing an astrologer at the death-bed of William the Good, of Sicily (1152–1189). Frederick, however, appears to have had many astrologers, one of whom was named Theodorus. Frederick always set a test for astrological applicants. To one he said, "If you wish to work for me, tell me by what gate I shall go out of the castle today?" The astrologer was as wise as Frederick, replying, "My answer shall be written. I merely ask that the king shall not open the letter until he is outside the walls." Frederick agreed but decided to outsmart the man, so instead of going out by any of the gates, he had a breach made in one of the walls, and by this breach he went out. Then he opened the astrologer's note and to his delight read, "The king will go out today by a new entrance." The astrologer was hired.

Frederick encouraged all men who could to make translations from Moorish, Arabic and Greek. He caused the *Almagest* and the *Tetrabiblos* to be translated from the Arabic. Anatolia, his chief translator, was a Jew from Marseilles. Evidently the advice of Maimonides to study the right kind of astrology had had good effect. Anatolia found that he could only proceed with the *Almagest* by making his translation first into Hebrew and then translating from Hebrew into Latin. His real name was Jacob ben Abba Maria (1194–1256) and his work was invaluable to both Jews and Christians. We know that the *Almagest* had been translated before, but as every one knows who reads translations, the exact meaning is often made more clear by seeing two or more translations of certain passages and making comparisons. Anatolia also made translations of Averrhoës' *Compendium of Astronomy,* Alfraganius' *Elements of Astronomy,* Al Farabi's *Syllogisms* and his *Commentary on Aristotle.* The translation of Averrhoës had very important results, for it precipitated one of the greatest religious controversies of the Middle Ages. His doctrines were considered heretical, yet everyone read what he could of him, in order to confute his teachings, or to incorporate what he had into his own philosophy. We must not forget, either, that Avicenna was a great exponent of the subject of Physiognomy, and that to Avicenna Physiognomy was a part of astrology, for every sign has its type or form. The work of Avicenna was popularized in Spain through Averrhoës, but Anatolia's translation of Averrhoës gave all this knowledge to Europe.

Michael Scot (c. 1175–1234), tutor and most favored astrologer and translator of Frederick II, was proprietor of the estate of Balwearie in Fife, Scotland. When quite young he decided to go to Toledo to study. After that, he appears to have travelled extensively. He probably visited the Near East and on his way back he settled at Frederick's court. There he made many valuable translations into Latin from Greek and Arabian authors. He rendered Aristotle's *Metaphysics* and his *Zoölogy* into Latin, and when Frederick decided to write a book on hunting, called *De Arte Venandi,* he made use of Scot's translation as basic material. Michael was also interested in medicine and translated, as had Gerard of Cremona, Avicenna's *Canon of Medicine.* Besides all this, he was one of the greatest authorities of the age on judicial astrology, alchemy, physiognomy and chiromancy. Tradition says he wrote books on all these subjects, but if he did, then the books have been destroyed. Roger Bacon tells us Michael was helped in his translations by a Jew named Andrew and a German named Hermon. Among the Spanish-Arabic books he translated was that of Alpetragius, *On the Sphere.*

Michael was known as the master magician of the age. It is said that far and wide, all over Europe, men trembled at the name of Michael Scot. In his own country of Scotland, the Scotch still use the phrase "the auld Michael," or "the Auld Mike," where the English would use the phrase "the old Nick," or "the old Harry."

Like so many who studied in Spain or in Italy, Michael was accused of learning at unholy sources, hence any knowledge he obtained was labelled anti-Christian and devilish.

As Michael Scot's books on astrology, alchemy and various other subjects disappeared, men asked everywhere where they could be. Hence a tradition arose that they were buried with the wizard at Melrose Abbey, and Sir Walter Scott bases his "The Lay of the Last Minstrel" on this supposition. Since he wrote this Lay, generations of people have revelled in the fearsome story of how the knight, Sir William Deloraine, was sent to open the wizard's tomb, and bring back the "magic" book, and how having done this, strange things happened at Branksome Towers, and how Sir William himself was terrified by a vision of the dead man:

His blood did freeze, his brain did burn,
'Twas feared his mind would ne'er return;
For he was speechless, ghastly, wan . . .
At length by fits he darkly told,
With broken hint and shuddering cold,
  That he had seen right certainly,
A shape with amice wrapped around,
With a wrought Spanish baldric bound,
  Like a pilgrim from beyond the sea;
And knew—but how, it mattered not—
It was the wizard Michael Scot!

The English had an old rhyme concerning Michael Scot:

> When he stampeth his foot in Spain,
> The bells do ring in Notre Dame.

The Scotch tell the story that at one time he was sent from Scotland on a diplomatic errand to Paris to demand reparations for damage done by French pirates on their coast. Michael evoked a fiend, who conveniently took the shape of a black horse [1] who could fly. He mounted this demon and arrived at the gates of the French king's palace in Paris. The king bade him begone, but Michael protested and said that before he would consider the king's answer to be final, he would bid his horse stamp his hoof three times on the ground. "Stamp, steed, once," cried the wizard. The horse stamped, and all the bells in Paris rang and crashed and jangled furiously, for the bell towers themselves were rocking. The king was aghast, so that he could not speak. "Stamp, steed, again," cried the wizard. The horse stamped his hoof a second time. Three towers of the king's palace crashed to the ground. "Stop!" screamed the king as Michael was about to give the third command, "and I will give you anything you ask."

Michael foretold to Frederick that he would die in Florence.* He also foretold that his own death would come about by something falling on his head. For this reason he always wore a small steel casque. However, on one occasion he must attend church with the emperor and so remove his cap. Hardly had he sat down when a small sharp stone fell from the roof and pierced his brain. Thus even Michael Scot could not avoid the destiny he foresaw. The Scotch have a proverb, "Ye maun dree thee wierd," meaning you must suffer or endure the destiny that is specifically allotted to yourself. "Wierd" is a Lowland Scotch rendition of the Norse word "Wyrd" or the fatalistic Necessity that enwraps each individual, and which is part of a divine order. The idea is that whether you foresee it, or whether you try to escape it, it cannot be sidestepped. It is, so to speak, waiting for you, and you have to go through it, willy nilly. We had much the same thought in Akiba's phrase, "Everything is foreseen," though Akiba qualified this by adding "yet freedom of will is given." People ask why one should want to foresee an event which is unpleasant. To which I would answer that by means of free will one can often mitigate the consequences of an event. If the event foreseen is death, one has a chance to set one's house in order. Also if this is the Divine Plan why not co-operate with it? Why are we afraid of death?

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[1] Richard I also was given in the legends a magic horse, but angels instructed him how to ride it.

* Actually he died in Florentino Castle.

We find in reading the "The Lay of the Last Minstrel" that not only was the learning acquired at Toledo suspect, but also the learning acquired at Padua. We are told of the Ladye's father that:

He learned the art that none may name
In Padua far across the sea.

"The art that none may name" is generally considered to be magic, but alchemy, astrology and kabbalistic studies were grouped under the term "magic."

Walter Scott also wrote "The Vision of Don Roderick," the last Gothic King of Spain, and in this he alludes to an idea common to all mediaeval people that the Moors taught their "wizardry" in deep underground caverns, the thought being that "Moorish studies" were too evil to be taught above ground, where the Sun would dispel the evil. In this poem of Roderick, Scott tells the story of how King Roderick entered one of these caverns outside the walls of Toledo, and there he encountered such a terrific wind that he was nearly blown back to earth, but he and his companion shielded their lights and finally were able to look around. Soon they saw a colossal statue of a Moor on horseback, striking great blows with his mace and so causing the wind. The Moor stopped striking and uttered this remarkable prophecy:

Thou shalt be dispossessed by a strange people.

Roderick had the cavern walled up, but in the night a tower fell upon it, and the entrance to the cave has never since been found.

It was an age indeed when one needed to be brave, morally as well as physically, in order to become a deep scholar. Let no one think that it was merely astrology that could cause imprisonment or death. Even music came under suspicion. It was Circe's art. People could come unwittingly under spells of enchantment through music, even as Ulysses had done. Note how the legend of the Pied Piper illustrates this fear. Various musical instruments were coming into Europe from Spain; and who knew what devils might be invoked when they were played? In Carlyle's day organs were gradually coming into use in Scotch churches, but even at that late date they met with widespread disapproval from many people. Carlyle himself speaks of "the growl of chapel organs, like prayer by machinery," but others said it was bringing the wiles of the devil into church. Dancing was also wicked—even the country Morris dances, for these were originally Moorish dances. Even to know Greek or Euclid might call down the suspicion of necromancy, both in Michael Scot's day and later. Elias Ashmole writing in the seventeenth century says, "Pope Sylvester the Second passed for magician in the worst sense because he understood Geometry; and about 150 years ago (so blind an age it was) that to know Greek and to know Necromancy were one and the same thing in the eyes of the illiterate."

I mention all this at some length because when people bring the charge of necromancy against astrologers, I want it to be known that almost every science and art has had the same charge brought against it. We should not forget too, when our critics gleefully tell us that astrologers were put to death in the early days, that people in other walks of life also were put to death. William Tyndale (1490–1536), who translated the New Testament, was under suspicion for his knowledge of Greek, and was later arrested for heresy, then imprisoned, strangled and burned.

We have read previously how John of Salisbury had spoken of the trivium and quadrivium,[2] or seven sciences. These gradually came to be called the "seven liberal sciences," but there were many people who called them "the seven arts of enchantment."

That Sir Michael Scot was not considered too evil a person at his death, we gather from the fact that he was given Christian burial at Melrose Abbey. It was probably his association with Frederick, the heretic and excommunicant of the Church, as well as his Eastern studies, that caused legend after legend of his necromantic art to grow rapidly after his death. People in general could not conceive of any man of great learning in the sciences not being in league with the devil. But education went on, and so did the translations of Moorish and Arabic works.

Frederick's son Manfred (1232–1266) employed Ben Hasday as a translator, and Charles of Anjou, who was King of Sicily 1266–1285 employed Farragut to translate Rhazes, while Robert the Wise (1309–1343) had large parts of Averrhoës translated. Under all these rulers, learned Saracens and men from the Near East were welcome in the Kingdom of the Two Sicilies, and with them came many servants, so that Saracen and pagan colonies became prevalent in these domains.

Arnauld de Villeneuve, or Arnoldus de Villa Nova (1235–1313), was an early writer on alchemy and on astrology. He wrote *Liber de Alchemia*. He was astrologer-physician to the Court of Aragon and translated Abulcasis and a book of Rhazes. For various reasons he was exiled to Sicily. He was, however, recalled to treat Pope Clement V at Avignon, but died during the journey.

Robert Grosseteste, friend, patron and teacher of Roger Bacon, was born about 1175 and died in 1253. He was Bishop of Lincoln and also Master of the School of Oxford, and evidently well versed in all kinds of astronomical and astrological matters, which he had studied in Paris. He wrote a *Treatise on the Sphere*. He is said to have been acquainted with the translation of the *Almagest,* which had been made at Frederick's court, and also with the *Tetrabiblos* and the *Optics* of Ptolemy. He himself wrote a *Treatise on Light* which was from his knowledge of Arabic scientists. He was interested in the making of lenses and mirrors, as was Alhazen. One wonders how many of these mediaeval mirrors were used in occult studies. Grosseteste knew Latin, Greek and Hebrew. He founded the order of Franciscans in England. When he died he left his library to the Franciscans.

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[2] See Appendix VIII.

Roger Bacon (1214-1294), a contemporary of Sacrobosco, absorbed all the studies of Grosseteste and later went to Paris to continue his studies, finally becoming a Franciscan friar. He was perfectly familiar with the writings of Albumazar on astrology and also with the writings of Geber the alchemist. Bacon himself wrote on astrology in his *Tractatus de Virtutatibus et Actione Stellarum,* a Tract on the Properties and Action of the Stars. Among his books on alchemy are *Speculum Alchemiae* and *De Diversis Tincturis.* Finding the tincture, or quintessence, was practically the same as finding the Elixir of Life or the Philosopher's Stone. Bacon and the alchemists believed that there is one original form in matter and that all elements could be converted back into this original form. Then, from this one form they could be re-established in whatever element one needed—gold or silver. Later alchemists tried to transmute substances directly from one form into another, and this was where they often blundered. Bacon's studies became suspect by the Church. He was accused of heresy by his enemies and imprisoned in the city of Paris, though he was actually a native of Somerset, England. He was released by Pope Clement IV, but ten years later the charges were renewed and this time he suffered fourteen years' imprisonment, being released two years before his death. Bacon, quite early, had studied the calendar and found various errors for which he devised rectifications. A copy of this Calendar was in Dr. Dee's[3] library and he probably referred to it when Queen Elizabeth asked him to give an opinion concerning the necessity of changing the calendar.

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[3] See Appendix X.

Like Francis Bacon later, Roger Bacon believed in experiment and observation in his quest for knowledge. It was this belief that led him into alchemy. He lectured at Oxford and Paris and was known as Doctor Admirabilis. From Bacon's time on, we find the Franciscan friars, in England at least, being known as the scientists and physicians of the Church, so much so that before long John Wycliffe was accusing them of sorcery. Bacon's study of medicine and philosophy led him to write *The Cure of Old Age and the Preservation of Youth*. He also made a translation of the *Secretum Secretorum* ascribed to Aristotle.

Among the translators contemporary with Roger Bacon was Bartholomew the Englishman, another Franciscan. He incorporated much from the Arabian masters in his *Breviarum seu de Proprietatibus Rerum,* Concerning the Properties of Things, in 1240. This is said to have been based on Alexander Neckham's book, but it may be more likely that each based his work on the same original. A copy of this, too, was in Dr. Dee's library. Two years before Chaucer died, the book was translated into English by John of Trevisa, and it appears to have been quite a favorite book for many generations.

If opposition increased, knowledge continued. The modern world is inclined to think that from Ptolemy's time down to the time of Copernicus and Galileo, people believed the earth to be flat. This of course was not so. They believed it to be a sphere but without motion. All motion was due, and confined to, the Primum Mobile which was a realm outside the realm of the Fixed Stars. It was in trying to find out and understand this action of the Primum Mobile, that philosophers and clerics had to study astronomy and astrology. The *Legacy of Israel* gives a very interesting old picture of the angels "cranking up" the Primum Mobile, showing that the cause of motivity was believed to be divine. Sacrobosco's and Grosseteste's treatises on the Sphere were studied in all the schools. Even the braggart Sir John Mandeville writes of having learned that the earth was a sphere. The problem of the geometricians and astrologers was how to draw accurately on the flat surface of a horoscope (which represents both heaven and earth), a representation of what was known to be spherical and not flat. It was for this reason that the translators of the period made known the geometry of the Arabs. People are inclined to say there was very little interest in learning until the time of the Renaissance. This is a foolish statement, for the desire to know and to learn is innate in certain people in all ages, but in certain specific ages it becomes so fashionable and so easy for the many to absorb what the great ones have already discovered, that chroniclers flatter them by calling them "ages of learning." The great men are always ahead of the masses, but occasionally the masses catch up with accumulated knowledge.

As learning increased in Europe the Church was somewhat perplexed. The Greek and Roman classics were gradually permitted to converts for their civilizing influence, but the clergy on the whole looked askance at the fatalistic concepts that were being spread, through the study of Arabic books on astronomy and astrology. It was almost impossible to prevent, even with the help of the Inquisition, the spread of the new learning. They therefore encouraged the use of Ptolemy's *Tetrabiblos* rather than the Arabic books on astrology, for the *Tetrabiblos* is not as fatalistic in concept as most of the Arabic textbooks. Mohammed's early teaching was not fatalistic but there was evidently a fatalistic leaning in the Arabic mind, and a belief in Kismet. The Church accepted the astronomical belief in the Primum Mobile, for this could be considered to be the dynamic activity of God, which started the world and which keeps all things alive and in order. Thus we find among the philosophers and religious group an ever-increasing tendency to write and discuss the action of the Primum Mobile, the First Mover, or First Cause. By the time of Dante the philosophers had discovered another sphere, a tenth sphere called the Empyrean or World of Fire and of God Himself.

It was this concept of a divine Primum Mobile that Albertus

Magnus and St. Thomas Aquinas taught. Now Manilius in his poem did not mention a Primum Mobile, but Aristotle had some such concept. Manilius was a Stoic, not an Aristotelian, and he says:

> God, the World Almighty Soul
> By secret methods rules and guides the whole;
> By unseen passes He Himself conveys
> Through all the mass,—and every part obeys.

which reminds us very much of Cowper's Hymn:

> God moves in a mysterious way
> His wonders to perform . . .

Traces of early thought concerning the mutual interdependence of religion and planetary concepts are discernible in the art of the Church. Hundreds of pictures in Books of Hours, that is, of prayers suitable for various times, decorated with the four gospellers represented as the four fixed signs of the zodiac, or with symbols of zodiacal signs, continued to be written. Sometimes we find pictures of Christ in an aura made with twelve points. There are many pictures of the nine orders of angels. In some, all nine are portrayed but the artists often found it more convenient to depict three circles, in which case it was supposed that each circle was threefold. By this time, everyone knew that the orders were astrologically assigned:

Thrones were of the realms of Saturn, since Saturn is static;
Dominions were of the realm of Jupiter, since Jupiter is a planet of rulers;
Powers were assigned to Mars, the planet of power;
Principalities were assigned to the Sun, symbol of kings;
Virtues were assigned to Venus;
Archangels were assigned to Mercury;
and Angels to the Moon.

Above the Thrones were the Cherubim and Seraphim, who controlled the Fixed Stars and the Primum Mobile, making the

Nine Orders. Religion and science were apparently working hand in hand.

Among the early alchemists of the fourteenth century was Raymond Lull, sometimes called Lully. He was called "the Enlightened Doctor" and seems to have united all kinds of extremes in his nature. He was a profound scientist but he was also a mystic, and his one great objective was to convert the Moslems. He became very friendly with Abbot Cremer of Winchester, who invited him to come to England in the reign of Edward III. Lully accepted, and the story of how he made diamonds out of rock crystal is quite famous, though some say it was gold he made and not diamonds. Ashmand tells the story in his *Theatrum Chemicum*:

> The rose noble (a coin) of Edward III, coined 1351, the Gold thereof, as is affirmed (by an unwritten verity) was made by Projection or Multiplication Alchemically by Ramond Lully, in the Tower of London . . . 'Tis worth observing that there was no Gold coined in England before the said Edward III's reign, and Raymond Lully was long in England before that, for Anno 1332 he wrote his *Testamentum Novissimum* in St. Katherine's Church near the Tower of London, and dedicated it to Edward III . . . he was brought over by Cremer, Abbot of Winchester, afterwards made known to the king, and did furnish him (the king) with much Gold.

Lully's alchemical victory at the Tower was advertised far and wide and appears to have started a very vital interest in England in alchemy. Other men made silver for the king; in fact, Edward made public proclamation of the fact:[4]

> Know all men that we have been assured that John Rous and Master William of Dalby know how to make silver by the art of Alchemy . . .

Lully appealed to popular fancy more than Roger Bacon, so though Bacon was persecuted Lully was not, at least no condemnation of him appeared during his lifetime. Over fifty years after his death his book against Averrhoës' concepts of Aristotelianism was condemned by a Papal Bull. Lully was a great student of foreign languages. He wanted everyone to learn foreign languages in order that the heathen might be converted. He suggested to Pope Clement V in 1311 that professorships in Hebrew, Arabic, and Chaldaic should be established at Oxford, Bologna, Paris and Salamanca. This suggestion was carried out and for a while all these universities helped in translation work. Lully then started on his last great pilgrimage to convert Moors and Saracens. He is said to have travelled through Spain, North Africa and Armenia. Unfortunately, on his return journey from Africa he was stoned to death.

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[4] See G. L. Craik, *Manual of English Literature* (Everyman's Library).

The Inquisition was established in 1233, and we come to a period when it was more difficult than ever for a man of learning not to be accused of heresy. Pietro d'Abano (1250–1316) studied first at Padua, then he went to Constantinople to study Greek. He visited the schools of Paris to learn medicine and mathematics, thence journeying to England and Scotland. He was one of the most learned men of the age and in 1303 was made Professor of Medicine at Padua University. In 1306 he was brought before the Inquisition for studying both astrology and alchemy, but he was cleared of the charges. He then left Padua and settled in Treviso, but was brought again before the Inquisition on the same charges. He died, however, before judgment was given. This did not end the matter, for judgment was given against him after his death, and his body was exhumed and cast to the flames.

Cecco d'Ascoli (1257-1327) was Professor of Astrology at the University of Bologna. He wrote a Commentary on John Sacrobosco's *Sphaera,* also a Commentary on Alchabitius. Besides being a scientist he was also a poet, but he was burned for heresy by order of the Inquisition.

In the thirteenth century Gautier of Metz wrote a poem entitled *Imago Mundi*. In this there is a whole chapter on astrology.

In 1270 Lali published *Al Kerania* which was the translation of Albumazar's version of the conjunctions as expounded by Gjamasp in pre-Christian days. This translation seems to have been responsible for the renewed desire to study mundane astrology, or the fate of nations.

One can hardly read Albertus Magnus (c. 1206-1280) without realizing that he must have had some real knowledge of the subject of the quadrivium,[5] which deals with the astrological-astronomical studies of the period. He says: "The mysteries of the Incarnation, from the Conception to the Ascension unto heaven, are shown to us on the face of the sky, and are signified by the stars." He believed that before our globe was created, the planets and zodiacal signs were created, hence he argued that they influence all succeeding events, and are signs of coming events. They even presaged the birth of Christ. Undoubtedly he had read Albumazar's book on Gjamasp, who had predicted the birth of Christ by the Jupiter-Saturn mutations. Albertus studied first at Padua and then taught Theology at Ratisbon, Strasburg and Cologne. He studied Physiognomy, as Hippocrates, Aristotle and Avicenna before him had done. He discourses on the seventeen different types of foreheads. Here is the sixth type:

> A square forehead denotes, according to Aristotle, magnanimity: *Quadrata frons pro facei ratione mediocris magnanimos ostendit ob similitudinem leonis.* Those that have square foreheads have prudence and magnanimity like a lion (or like the sign Leo).

Physiognomy was, and still is, by certain people, based on astrology.

Thomas Aquinas (1226–1274), sometimes called Saint Thomas Aquinas, was of noble birth and became one of the greatest theologians of the Middle Ages. He is now regarded as the patron saint of all Roman Catholic educational institutions. He was the pupil of Albertus Magnus. Aquinas is said to have written and lectured against astrology, but on analysis it would appear that this was against the charlatans and pretenders to astrology rather than against those who knew and understood their astrology. He agrees that the stars have definite influence upon human beings and can be causes of action. On the other hand, he did not agree that every action caused by the influence of the stars is inevitable, for the will of man can fight against what the stars would incline him to do.

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[5] *See* Appendix VII.

When Paul Choisnard in 1926 was starting to bring together many of the scientists of Paris, with the object of founding and starting a scientific school of astrology, he was met by various statements that Aquinas was against astrology. So in his sensible practical fashion Choisnard said, "Let us try to find out what Aquinas did say." His book, *St. Thomas d' Aquin et l'Influence des Astres,* is the result of Choisnard's own inquiries. He writes:

> When one speaks of the eminent men who during the centuries have adhered to this, so to speak, "absurd superstition" of astrology, one does not have to name them with any embarrassment or in any apologetic tone: among them are Saint Thomas, Tacitus, Galen, Tycho Brahe, Kepler, Cardinal d'Ailly and others. What demands attention in St. Thomas is that he is the only Philosopher, who has openly incorporated the principle of the influence of the stars into his doctrines, and who has spoken of astrology with respect in his discussions. I doubt if the matter [of astrology in philosophy] has been worked at since the Middle Ages. Saint Thomas was not an astrologer in the sense of being a maker of horoscopes, but he had the good sense and courage to reveal the essential truth in astrology and not to avoid it. It is to my mind the only philosophy which has known how to distinguish between true and false astrology without confounding the two in the same superstition. Aquinas has maintained, with good sense, but with a shining prudence which we must admire, that a guard must be set against the abuse which people make of astrology.

In brief, St. Thomas writes in favor of an astrology that accepts free will. He accepted astrology, because every part of nature is in accord with every other part.

Although St. Thomas is much later in time than the Moorish teacher Averrhoës, yet he spent much of his life combating the heresies of the latter. From the astrological point of view the dispute revolved around questions concerning the religious concepts connected with the Primum Mobile and the doctrine of Emanations.

In the thirteenth century the Alphonsine Tables were compiled. They are sometimes known as the Alonzine Tables. Students of astronomy and astrology were clamoring everywhere for more accurate observations and tables. The ones most in use were those of Arzachel,[6] compiled nearly two hundred years before. A number of Arabian, Jewish and Christian astronomers and astrologers were brought together by Alphonso the Tenth, sometimes called the Wise, of Castile. These men were equipped with the best instruments, and finished their work in 1274, making their calculations for the longitude of Toledo. Dante during his exile is said to have visited Castile to look at these tables, and his astrological teacher Bruno Latini did the same. A more accurate series of tables was made in 1433 by Uleg Beg, Prince of Samarkand, but the Alonzine tables were a remarkable feat of the period.

Of Dante I shall speak in the next chapter. During his period astrology was of paramount importance in Italy. However, among the detractors we must not forget to mention Petrarch (Francesco Petrarca, 1304–1374). If Petrarch renounced astrology he also renounced his own poems, thus one is inclined to think his judgment was warped, in more than one direction. Petrarch knew little of the subject of astrology because he was prejudiced against it, just as he was prejudiced against medicine because he knew little about that either. He could not conceive of any fundamental good in medicine, or in any science of his time, because he only looked at externals, and not into fundamental principles. For this reason he contributed very little to the sciences except criticism. Other men with less eloquence have contributed much more. We might also note that one of Petrarch's closest friends was Mayno de Mayneri, one of the best astrologers of the time. This is quite typical of many of the opponents of astrology. They like to have their own chart read (they call this researching), but they think no one else should have a horoscope read. Pasquale Villari[7] speaks of him thus:

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[6] *See* Chapter 15.

> Petrarch is a fierce opponent of jurisprudence, medicine, philosophy, of all the sciences of his day, because they do not fulfil their promises, but rather keep the mind enchained amid a thousand sophistries. His writings are often directed against scholastic philosophy, alchemy, astrology, and he is also the first who dared revolt against the unlimited authority of Aristotle, the idol of the Middle Ages. All this does the greatest honor to the good sense that raised him above the prejudices of his day. But it would be a gross error to seek to find in him a daring scientific innovator. Petrarch does not fight in the name of a new principle or new method, but in the name of beauty of form and of true eloquence, which he cannot find in the sciences, and cannot discover in the ill-translated and mutilated Aristotle of his times.

Among the early compilers of tables in England was Thomas Bradwardine (c. 1290–1349), Chancellor of the University of Oxford and Confessor to King Edward III. He wrote on speculative geometry, on speculative arithmetic and on proportions. He seems to have been well acquainted with astrology and certainly his astronomical tables helped astrology. Evidently the Pelagian heresy was still strong in England at the time, for he wrote a strong treatise against it, entitled *De Causa Dei contra Pelagium,* stating that although God is the author of all predestination, nevertheless the physical type of man and his general expression are conditioned by the stars, which are the instruments of God. On the whole, he follows Al Kindi's philosophy.

Flourishing in the early fourteenth century were Kolonymus and Gersonides. Kolonymus ben Meir (1286-1328) was born in Provençe. He translated from Arabic into Hebrew no less than thirty-two books on mathematics, astronomy, astrology and medicine. Gersonides, or Levi ben Gershon (1288–1344), was born in Bagnoli and apparently spent much time at Avignon. He was a good mathematician, astronomer and astrologer. In his *Wars of the Lord* he speaks of the nature of the planets. Pope Clement VI ordered a translation to be made of one of his treatises, which described an instrument Gersonides had invented to determine the position of the stars more accurately. Gersonides wrote against the theory of Alpetragius concerning the universe, and because of the arguments he used, he is said to be one of the major forerunners of the Copernican theory. A passage in one of his books caused much argument. It was to the effect that God does not concern Himself with the petty details of human lives. God knows the laws and principles operating at any specific moment, but the detailed happenings are hidden from His Spirit. In part of this, he apparently follows Avicebron, who had insisted on the study of principles rather than of objects in matter, but the conclusions were his own. However, the argument on whether we should study principles or objects, is one that has divided the world from the beginning of time until now. Ramus and Tycho Brahe argued the matter. We must have facts before we can formulate principles, but on the other hand if the principles are incorrect, the facts will not agree. The problem is always to know what principles are correct. The dictatorship of Aristotle and the Aristotelians, in the Middle Ages, consisted in the fact that Aristotle was supposed to have presented all the principles. Hence he acted as a deterrent to the experimental finding of truth.

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[7] *Life and Times of Machiavelli,* by Pasquale Villari (T. Fisher Unwin).

Then we should not forget Jacob Carseno, a Spanish Jew at the court of Pedro IV of Spain. He translated the Tables of Don Pedro from the Catalonian into Hebrew in order that his Jewish friends and students might have the advantage of these tables.

Towards the end of the 14th century massacres of Jews in Spain became widespread. They asked John I of Portugal to give them refuge, which he did. Here they were well received until one of their astrologers predicted the death of King Duarte. The fact that the king died quite suddenly did not make matters easier for the Jews, and persecution began in Portugal.

In France astrology was paramount at the royal palace. John II, King of France (1350-1364), had several astrologers who tried to help him in his wars against Edward III. But fate was against the king and he was captured at Poitiers in 1356 and taken as a prisoner of war to England until his ransom should be paid. As the French were not able to collect the money for the ransom, John petitioned that his two astrologers, Pierre de Valois and Guillaume de Loury might visit him. This was granted and they stayed with the king in exile until the latter's death.

John's son, Charles V of France (1364-1380), sometimes called The Wise, was also a devotee of astrology. The records of the royal library of the time show that Charles had no less than nine hundred and ten astrological books. Even we moderns cannot beat that record. Among his astrologers were Thomas of Pisa, Michael de Jalongues, Marc de Gennes, Jacques de St. André.

Astrologers were used by both French and English in their wars of the fifteenth century.

The emperors of the Holy Roman Empire all employed astrologers. An astrologer was as important, if not more so, than a general. The Emperor Charles IV (1316-1378) founded the University of Prague on the same model as that of France, where astrology was taught.

The Italian rulers also employed astrologers. Cosimo de Medici (1389-1464) employed Maestro Paolo Toscanelli, usually called in the histories of the period Maestro Pagola. He was the author of the map used by Columbus in the discovery of America.

Before we proceed further we should not forget the subject of playing-cards. We are all familiar with "telling fortunes" by playing-cards, but few realize that it was an astrological method of divination. The four suits represent the four fixed signs and the four seasons of the year:

Diamonds	Taurus	Spring
Hearts	Leo	Summer
Spades	Scorpio	Autumn
Clubs	Aquarius	Winter

The cards show their ancient origin in that Taurus instead of Aries is the equinoctial season. Compare with Virgil's phrase about the Bull opening the year.

There are 13 cards in each suit, that is, the 13 lunar months. The four suits of 13 cards each make the 52 weeks of the year.

If we add the numbers from 1-13, we have 91. Then multiply by 4 for the 4 suits, and we have 364, or the approximate number of days in a year. The Joker brings the total to 365.

Evidently a great wave of card-playing started about the end of the fourteenth and early part of the fifteenth centuries, for in 1397 there was a French edict preventing men from playing cards on work days. Then, in 1404 the French clergy were forbidden to play cards at all, a matter showing they had done so previously. In 1420 both the cities of Bologna and Nuremberg were ordered to make bonfires of all their cards.

During the past century the study of Tarot cards has received considerable attention. They were probably the predecessors of our modern playing-cards. They were known in Switzerland in 1377 A.D., for a Swiss monk named Johannes informs us that the game was introduced into Switzerland in that year. French records show us that in 1392 money was paid for painting three packs of cards in gold and other colors for King Charles VI. In Venice in the fifteenth century the pack was the "tarot," and consisted of 78 cards, that is, 22 emblematic cards not now used in our ordinary packs. There were four court cards, king, queen, chevalier and valet, instead of our three court cards, and there were, of course, the numbered cards from one to ten. The emblematic cards were a higher order of trump cards than we know, but in divination they played a very important part.

These Tarot cards, being pictorial, as well as numbered, give us definite clues to methods of divination. The emblematic group of 22 cards reveals that the men who made these cards were deep and profound students of astrology. The number 22 reveals that their origin was connected with the Kabbala, where we have seven cards related to the planets, 12 cards related to the signs and three assigned to a trinity (or upper triad in the Kabbala).

Ancient astrologers knew how to amuse as well as educate people. The mediaeval play of Harlequinade, still played in all pantomimes in England, was astrological in origin. It is based on the fact that the four fixed signs are symbolic in essence of the four-fold being of man:

1.	Leo	Spirit
2.	Scorpio	Soul
3.	Aquarius	Mind
4.	Taurus	Body

In early days, the Church having to teach people who could neither read nor write, often tried to convey deep truths through dramatic activities. The interplay of body, mind, soul and spirit was shown in the harlequinade, which has now become a short play in which Harlequin, dressed either in shining gold or silver, rescues Columbine from the Clown and Pantaloon. If we study the inner meaning, we again come to an astrological assignment:

1.	Harlequin	Spirit	Leo
2.	Columbine	Soul	Scorpio
3.	Clown	Mind	Aquarius
4.	Pantaloon	Body	Taurus

The plot was intended to show that Spirit is the true friend of the Soul, who is Columbine or the dove which has the wings of flight, the intuitional faculties and the imaginative faculties. Mind and Body can be enemies of the Soul. Mind as an enemy of the Soul would be the false-reasoning, or matter-of-fact mind, which believes that there is nothing beyond man's ability to weigh, measure and argue.

Before closing this chapter let me comment briefly on the various periods when people have thought "the end of the world" was due. When studying European history in college, I remember our professor speaking of the fear that beset Europe at various periods because the masses imagined that the "end of the world" was imminent. I recall his saying that these fears came from studying the Book of Daniel and the Book of Revelation, and not understanding that the term "end of the world" meant "the end of the age, or cycle of time." He spoke of the years 600, 1000, 1260 and 1840 as being particularly years of fear among large numbers of Christians. The matter interested us all and I suppose some students must have discussed it at their churches, for a few weeks later we found that almost every preacher in town had delivered a sermon to the effect that the "age of prophecy died in 70 A.D." with the sack of Jerusalem, and that only misguided members of the church had ever made any such later predictions,—all of which we duly retailed to the professor, who, apparently being too wise to participate in a religious argument, merely remarked that if we were interested we could look up the matter for ourselves. For myself, I did not trouble to study the matter until the last War when the Reverend Walter Wynn was giving lectures on Bible Prophecy and was correct in all his predictions, notably the exact date of the surrender of Jerusalem and the exact date of the German request for an armistice. Then I found that many well known churchmen of the utmost sanctity, had, throughout the centuries,—tried to expound Daniel and Revelation, but evidently had not had the right clues.

What was my surprise then, after I became an astrologer, to find that some learned antagonists of astrology today, are stating and writing that the fear of "the end of the world" was engendered by the "rabble of astrologers" in all periods! Curiously enough certain other antagonists write that astrology was "dead" in the early Christian centuries! One or the other statement must be wrong, perhaps both.

Since historical records prove that the fear was widespread, let us note the various dates as I gave them before, and some others, before we assign any blame. Long before Daniel lived, Ezra lived. There is a book of his called the Book of Esdras which had been assigned to the Apocrypha. In this he speaks of the age of the world, how much is past and how much is to come. Working on his cycles, it would appear that he believed the "end of the cycle," which with him was obviously a precessional one, would arrive in 2480 A.D.; [8] that is, this would be the end of the Piscean Age and the beginning of the Aquarian Age. Then, the Babylonian and Chaldean chronology, of which Daniel was an exponent, used various periods of sixty years, called *sosses* [9] and also a period of 1260 years, which is 21 *sosses,* but which is also the mysterious "time, times and a dividing of time" spoken of by Daniel, where:

A "time" is	360 years
Two "times" are	720
Half a "time" is	180
Total	1260 years

The Book of Revelation speaks of a period of "a thousand years." I have not space in this book to give more than a very brief sketch of how certain scholars and churchmen tried to decide to what initial date any of these figures should be added in order to determine the "end of the world," but it was this initial date that caused all the problems of prediction.

Next, added to all this, the Persians and Arabs used the Jupiter-Saturn Mutations, or Conjunctions, of 20 years, with multiples, accounting for the change of trigon of these mutations in roughly 12 times 20 or 240 years, and for the return of specific trigons in 4 times 240 or 960 years.

Then Virgil's [10] Fourth *Eclogue,* which describes the "ten ages" of mankind, proved to be the next complication. People said he used the Babylonian *soss* of 60 years, hence the "ten ages" would be 600 years.

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[8] *Basis of Scripture Prophecy,* by Sepharial (David McKay Co.).

[9] *See* Appendix II.

[10] *See* Appendix XIV.

It appears to have been a favorite pastime in the early centuries to try to predict the arrival of new world teachers and new epochs of civilization, using all these statistics, singly or in combination, but the masses ignorantly supposed that the "end of the age" meant nothing else but the destruction of the world by water or by fire. Virgil apparently thought that Augustus Caesar heralded in a new age, and as Augustus was born 63 B.C., people added the "ten ages" or 600 years and said that date would be the "end of the world." Others said Virgil was not referring to Augustus at all, but to Christ, so these latter put the "end of the cycle" in 600 A.D. Apparently, the "end" did not come in 600 A.D. However, when the Moslem power started to rise about 622-637, the Virgilites said they were about right. Others said perchance this cycle had been passed by and the world must wait another six hundred years, that is, to 1200 A.D. Others remarked that the 600-year cycle might have been correct for the pagan world, but that the Scriptures governed the Christian world, so they went back to *Revelation,* saying that the year 1000 A.D. would herald the Second Coming of Christ at Jerusalem and also the appearance of anti-Christ at Antioch. This date, too, passed safely, whereupon Daniel's period of 1260 years was promoted, and many supposed this period started with the Christian epoch. So much was predicted about the Second Coming that the Crusades were preached in every country of Europe as a Christian duty of clearing the Holy Land of infidels before Christ's arrival, and the Crusades came into being largely because people were told that it would be a disgrace, if when Christ came again, He should find infidels in possession of His birthplace and of the place of His crucifixion. So sure were people of His Coming that they went even further and said that He would appear over Jerusalem and that anti-Christ would appear at Antioch, and for this latter reason when the Crusaders went to Palestine, they first bombarded Antioch, so that anti-Christ should find nothing of value there. I wonder if the critics would like to state that "a rabble of astrologers" started the Crusades?

Perhaps, if the truth were known, the astrologers who had studied the Arabic books, saw more clearly on the whole than anyone else, what all this interlocking of time cycles meant, but if any of them had tried to combat the popular concepts that swept Europe, he would have been termed an infidel. One or two lesser ones, who may have agreed, were blamed when the "end of the world" did not arrive. With regard to the 1840–1844 dates, I believe one of these was put forward by the Seventh Day Adventists, working forward 1260 lunar years from the Hegira in 622 A.D. If, however, 1260 solar years are added to 622 A.D., we arrive at the year 1882 A.D., a year when certain occult groups said the Aquarian Age started. As a matter of fact, there is still considerable controversy as to what was the date of the beginning of the Piscean Age, or the Arian Age. Sayce gives the date of 2450 B.C. for the latter. The date of the inception of these Ages will determine the date of the Aquarian Age. The matter is entirely astronomical and not astrological, except in so far as astrologers assign certain attributes to certain "ages," or precessional cycles.

Chapter 17

THE ASTROLOGY OF DANTE AND CHAUCER

Stars,—the thoughts of God in the heavens.
LONGFELLOW

WHEN WE COME to the times of Dante and of Chaucer, we see that astrology had become a major subject for the poets. All three sections of the *Divine Comedy* are based on an astrological scheme which dovetails into a kabbalistic scheme. Dante starts on his wanderings when the Sun is in Aries, which is the beginning of the zodiac, and which sign was considered to be the Ascendant when God first created the world:

> The hour was morning's prime and on his way
> Aloft the Sun ascended with those stars,
> That with him rose when Love Divine first moved
> Those its fair works.

He wanders into a wood and there he is lost. One after another three animals cross his path, a panther, a lion and a she-bear. They are symbolic of three qualities which bar the way to spiritual vision,—pleasure, ambition and envy. They look so menacing that he is afraid, but in the midst of his fear, Virgil arrives. Virgil is symbolic of the qualities of the planet Mercury,—human intelligence and the ability of the mind to control what is evil and unbalanced in the emotions. Virgil then becomes Dante's guide. He takes him down through the regions of the Inferno, and up to the heights of Mount Purgatory,—then he leaves him in charge of Beatrice, who symbolizes the illumined soul.

The "Inferno" has ten sections, according to a kabbalistic scheme, if we consider the wood in which Dante is lost as a preliminary Hell, or Section Number One of the kabbalistic scheme.

Section One is a sphere in which the mind is so distraught that, to all intents and purposes, it is on the confines of Hell. Mind, or Virgil, then enables Dante to see, or analyze, all the phases of thought or emotion which cause mankind to live in hell. In one general category, the inmates of hell are confined to hell for no other reason than that they have "abandoned hope." They are fatalists. They cling to their evils and faults, believing them to be a part of themselves which nothing can shake off. They look downwards and never upwards.

Section Two is another preliminary circle at the top of Hell, reserved for inane people,—"the wretches who never lived," who believe nothing and who hope for nothing. They are the people who live purely vegetative lives. Mercury, or mind, is dormant.

Section Three is the realm of the philosophers who lived before Christ. Dante considered them to be good men and wise, but being without hope of heaven in their philosophy they have not made any effort to reach heaven. They are the Mercurians, who are quite satisfied with what they have reasoned out for themselves. They have a reason for everything but no concept of any faculty beyond reason.

Section Four is reserved for lower Moon types in which nothing but emotion predominates. Here Dante places lovers like Paolo and Francesca, whose emotions overruled both duty and common-sense.

Section Five is for types who respond only to the lower side of Venus,—gluttony and prodigality.

Section Six is reserved for the poor solar types who, instead of joying in the Sun's radiance, have allowed wrath and gloom to overcome them.

Section Seven is the realm of Mars where people fight, not for the truth but against it.

Section Eight is the realm of the suicides and the choleric Jupiterians. They sin against wisdom.

Section Nine is the realm of the hard-hearted Saturnians, who have been hypocritical and deceitful.

Section Ten is reserved for Judas alone, who loved no one more than himself. Fire is too good for such a person, so he is chained to a block of ice which represents his own cold heart.

In all this journey through the Inferno, Dante reveals the psychology of which the old astrologers were masters. Each sin has its own punishment,—the envious have their eyes sewn up, because envy prevents one from seeing any good in other people. The angry are in a brown fog, for anger beclouds issues.

Having seen all this misery that people make for themselves, Dante and Virgil are allowed to find a passage which leads to the open air and to the other side of the world. The other side of the world represents symbolically another way of looking at things. They see the stars of the Southern Cross. Everything is symbolic even to "seeing the stars." Dante has seen in his heart some divine light which tells him there is hope of something better. They arrive at the foot of Mount Purgatory when the Sun is in the sign Scorpio, the sign of regeneration.

Purgatory, too, has ten divisions; and the people in Purgatory have the same faults as those in hell, but they do something about them. They strive to overcome them. They are infused with divine hope, and in this hope they conquer.

Whereas, in the "Infero," Dante travelled downwards through the pit, in "Purgatorio" he travels upwards from one ledge or cornice on the mountain to the next ledge.

Section One is a preliminary region around the Southern Cross, which, being a cross, represents the sphere where mediation on the four cardinal virtues is necessary,—on Justice, Prudence, Temperance and Fortitude, or, astrologically, all that is comprehended in the philosophy that is contained in the Four Elements.

Section Two is another preliminary region, where the constellation of the Great Bear (the Dipper) is seen, which, having seven major stars, represents the four cardinal virtues plus the three evangelical virtues of faith, hope and charity, or, astrologically, all the good qualities assigned to the seven planets.

Section Three is the cornice of Saturn, where the proud must learn the blessing of humility.

Section Four is the cornice of Jupiter, where the niggardly learn to be bounteous.

Section Five is the cornice of Mars, where the violent learn to be meek as lambs.

Section Six is the cornice of the Sun, where the lazy Sun types, who love to bask in the Sun, learn to be great workers for others.

Section Seven is the cornice of Mercury, where the thieves and the avaricious learn to give to others.

Section Eight is the cornice of Venus, where the gluttons learn temperance.

Section Nine is the cornice of the Moon, where unfaithfulness is lost in a concept of purity.

Section Ten is the Earthly Paradise of a good life. In this realm Virgil crowns Dante:

> I invest thee then
> With crown and mitre, sovereign o'er thyself.

Virgil then leaves Dante. Human reason is not what takes man to heaven. There is, however, one more important stage before Dante can proceed to the planetary heavens. He has to forget the wrongs that people have done him, hence he is bathed in the River Lethe (or forgetfulness) and then in the River Eunöe (or the remembrance of good deeds only). No one with a "chip on his shoulder" enters heaven, according to Dante. After this, Beatrice, the illuminated soul, becomes Dante's guide.

Paradiso is the place where no one disputes his destiny; it is the place where "our wills with His are one." It, too, has ten realms.

Section One is the heaven of the Moon, where everyone is emotionally content.

Section Two is the heaven of the planet Mercury, where the philosophy of free will is discussed.

Section Three is the heaven of Venus, where people grow beautiful in the radiance of heavenly love.

Section Four is the heaven of the Sun, where God gives new life and energy and a new impetus to man.

Section Five is the heaven of Mars, where the martyrs are now triumphant.

Section Six is the heaven of Jupiter, where those who have the ability to govern well and to use right judgment are placed.

Section Seven is the heaven of the great Saturnians, who are the great contemplatives of the church.

Section Nine is the realm of the Fixed Stars, where Dante is so exceedingly happy in his own constellation Gemini.

Section Ten is the Empyrean, or the realm of the Pure Fire, where God Himself dwells. Here Dante is given a momentary vision of the Trinity. He becomes one with "the Love which moves the sun and stars." His journey is ended then in this union with God.

I suggest that those who wish to look into this kabbalistic scheme further turn back to Chapter 7, where the kabbalistic scheme is discussed.

Where did Dante learn all this astrological and kabbalistic lore? We know that he had a kabbalistic teacher named Solomon, and that his astrological teacher was Bruno Latini, who himself wrote various books on astrology, notably *The Treasure*. Bruno too was well acquainted with all the ancient astrologers' works, those of Albumazar [1] and of the Arabs. Longfellow, who was Professor of Romance Literature at Harvard University, worked on these sources when he decided to make a translation of the *Divine Comedy*, and in various of the early editions of his translation, we find full-length notes giving extracts from Albumazar on the planetary influences. Also in Dante's *Convito* we find that Dante is so fascinated by the subject of astrology that he goes to great lengths to find some fundamental likeness [2] between the seven subjects of the trivium and quadrivium and the seven planets. Dante was placed on the Index for five hundred years.

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[1] *See* Chapter 12.

[2] *See* Appendix VIII.

We have mentioned before that Dante put Michael Scot in his "Inferno." He relegated Guido Bonatus there, too. There are many very conflicting accounts of Bonatus. Some say that he was invaluable to the Count of Montefeltro in choosing the right times for his battles and campaigns. Others poked a great deal of fun at him and spoke only of his astrological predictions that failed. It seems that originally he was a tiler and had not the social background of such men as Michael Scot and others, hence many people despised him. Yet if we study his *Anima Astrologiae,* which contains 146 Considerations of Horary Astrology, a book which is readily available today, it is evident that he was scholarly, painstaking, acquainted with the major astrological authors of the past, and really knew how to read a chart. He was commonly called in his times, "The Restorer of Astrology," but this is a title that men have taken in all ages down to the present. A translation of his *Anima Astrologiae* into English was made by Henry Coley, and edited and published by William Lilly in 1675. It was reprinted in 1866 and several times since then. Bonatus demands that the client, when asking a question of an astrologer, shall be serious and only ask questions of vital importance; he shall not think up silly questions but only ask about matters that have disturbed his peace for the space of at least a day and a night, except in case of accidents which do not admit of delay and which, by intensity, make up for the absence of duration. Lilly, in his edition, adds a comment on this:

> Those who take this sober course, shall find the truth in what they enquire after; but whosoever do otherwise, deceive both themselves and the artist; for a foolish Querent may cause a wise Respondent to err, which brings a scandal upon Art amongst inconsiderate persons, whereas the Astrologer is not blameable, but the ignorant silly Querent.

We might note here that astrology, though based on science, is really, as Lilly says, an art. The art lies in the synthesis or final diagnosis, judgment, or whatever the resulting answer may be called. Yet among people that Lilly calls "inconsiderate" there are many whose wish is merely "to test" the astrologer, rather than to have some really vital question analyzed. Policewomen, therefore, and other so called "investigators," who come with false data of birth and with questions that have no reality, have apparently wonderful cases in court. A false start can only have a false conclusion. Bonatus mentions the astrologer Zael as one of his chief sources for horary astrology and Almansa[3] on the influence of the fixed stars.

I have sometimes heard and sometimes seen the statement that Dante placed in Hell all people who tried to predict the future. This is either a deliberate misstatement of the truth or else colossal ignorance. Let us look at the facts: Dante places Farinati, the renowned leader of the Ghibbelines, in Hell. He even places his own dear teacher Brunetto Latini in Hell, but he makes both of them foresee his (Dante's) exile. However, it is evidently not the predictive art that places them in Hell, but the fact that Dante considered them either to be heretical in doctrine, or else deserving of punishment for some specific sin. To Farinati he says:

It seems that you can see, if I hear rightly,
Beforehand, whatever Time brings with it.

To which Farinati replies that he sees things in the distance but things that are imminent, or which are already in being, are not perceived by him. (Mediums often have some such limitation connected with the time factor.) Dante wishes to question him about his own future, but Farinati merely gives him a hint that all is not well with the future of Dante. Then Virgil speaks, telling Dante that not until he meets Beatrice will he know all the facts about the future. He says:

"Let Memory preserve what thou hast heard
Against thyself," that Sage commanded me,
"And now attend here"; and he raised his finger.

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[3] Sometimes called Almansor, Albubater or Albucasis, physician-astrologer of Cordova in the late 10th century.

When thou shalt be before the radiance sweet
Of her whose beauteous eyes all things behold,
From her thou'lt know the journey of thy life.

When Dante meets Bruno Latini, he shows his affection when he addresses him by the diminutive, Brunetto:

Art thou here, Ser Brunetto?

To which his master replies, reminding him of what he had once prophesied to him:

If thou thy star do follow,
Thou can'st not fail thee of a glorious port,
If well I judged in the life beautiful.

And as Brunetto leaves, Dante tells him how he holds in mind and heart:

The dear and good paternal image
Of you, when in the world from hour to hour
You taught me how a man becomes eternal;
And how much am I grateful, while I live
Behoves that in my language be discerned.
What you narrate of my career I write,
And keep it to be glossed with other text
By a Lady who can do it, if I reach her.

Conrad Malaspino, however, who also was able to tell the future, is not placed in the "Inferno," but in the "Purgatorio." He also prophesies Dante's coming exile:

The Sun shall not lie
Seven times upon the pillow which the Sun
With all his four feet covers and bestrides,
Before that such a courteous opinion
Shall in the middle of thine head be nailed,
With greater nails than of another's speech,—
Unless the course of justice standeth still.

In the "Paradiso," Dante falls in line with Boethius:

> Allowing it to be true that events are foreseen.

and we find that *he puts the prediction of his coming exile into the mouth of his ancestor Caccioguido,* and not into the mouth of the Blessed Beatrice, as we might have expected from the lines in the "Inferno." Nevertheless, it is Beatrice who actually urges him to ask his ancestor about the future, and the prophecy of the coming exile is given in these words:

> Thou shalt have proof how savoreth of salt
> The bread of others, and how hard a road
> The going down and up another's stairs.

All of which goes to prove that Dante was not opposed to predicting the future!

If Geoffrey Chaucer (1340-1400) had not written his *Treatise on the Astrolabe,* which incidentally was never completed, people would be inclined to say that he was neither an astronomer nor an astrologer, but that he had merely inserted casual references to astrology throughout his poems, such as anybody might do, but even here these references are not "casual," they are the result of a very fine technical knowledge of astrology. *The Treatise on the Astrolabe* was written in order to help "his little son, Lewis," who was at Oxford, where astrology was then one of the subjects. In this *Treatise* he says, "Every one of the twelve signs has respect to a certain part of the body, as Aries governs thine head, and Taurus thy neck, Gemini thine armholes, and so forth as shall be shown in the five parts of this Treatise." Chaucer is said to have followed John Sacrobosco's *De Sphaera* for his definitions and his descriptive astronomy, while for his conclusions he used the Arabian Messahala's works. Tyrwhitt, in his comments on Chaucer, says that Chaucer took some of the subject matter on elections from a *Liber Electionem* by a certain Zael, copies of which are now in the Harleian and Bodleian libraries.

In reading *The Mediaeval Attitude Towards Astrology* by Theodore Otto Wedel, I note that in commenting on Chaucer's *Treatise on the Astrolabe,* he thinks Chaucer renounced astrology. I am afraid that Mr. Wedel's ignorance of astrological technique has prevented him from understanding the particular passage which he quotes as proof of the renunciation. What Chaucer is saying (II, 4), I would paraphrase very briefly in this way: An Ascendant is truly the actual degree rising in the East. But the House of the Ascendant (that is, the First House) is a much bigger thing than the Ascendant. Nevertheless, if a planet is above or below the Ascendant by five degrees or less, then astrologers say it is "in the Ascendant," but if the planet is fifteen degrees or more away from the Ascendant, then this planet is said to be "falling away from the Ascendant." An Ascendant is fortunate if it contains no evil planet, like Mars or Saturn, and if it is free from the Dragon's Tail. Also, the Ascendant is fortunate if no evil planet gives a bad aspect to it. It is very fortunate if it contains a fortunate planet, especially one in its "joy," or exaltation.

But Chaucer goes on to say that some people have contrary ideas on this. They say[4] that when one is deciding whether an Ascendant is fortunate or not, then one has to consider where the lord of the Ascendant is. They want it in some particular spot in the chart, and it must be well aspected, and not combust, not retrograde and not conjoined with a malefic. Chaucer then bursts out with the statement that these latter ideas concerning the Ascendant are "rites of pagans in which my spirit has no faith." Also included in his outburst is the fact that these pagans divide their zodiacal signs into three parts and call each tenth part a "face."

This is no renunciation of astrology, but a particular astrologer giving an opinion on a technical matter. The question is, "When you are considering whether an Ascendant is fortunate or not, do you have to consider the position and aspects of its ruler?" Chaucer would have replied to this, "No, you don't,—and only a heathen would say you do!" My own answer to the question would be that one always takes into account everything that Chaucer thinks one should, but that one has to modify the opinion so found by considering the lord of the Ascendant, his position and aspects,—as the pagans did, but not making the lord of the Ascendant the only issue.

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[4] Chaucer uses the phrase "they say" very much as the French use "on dit," meaning *it is said.*

Particularly in the *Canterbury Tales* does Chaucer write much that is too astrologically true to be the work of an amateur. Any astrologer who reads the story of the Wife of Bath will recognize her type, as Chaucer did,—Mars rising in Taurus. Note, too, that when she speaks of one of her many husbands as having been an astrologer, it causes no surprise among the listeners. She speaks of his love of ancient learning, and of his great interest in reading about the bad women in history, and makes the comment that men wrote these books, but that if women had written them, some of the men might not have appeared any more angelic than did the women. As she moralizes on all that has been written against women, she makes one of her finest astrological observations on the natural antagonism between Mercury and Venus,—Mercury being the sign of the scribe or clerk, and Venus being the goddess of love, and that it is impossible for Mercury and Venus types to see eye to eye. Then she states that people with Mercury in Pisces, the sign where Mercury *falls,* have no luck in love, because Pisces is the place of the exaltation of Venus. Also we infer from the lines that Venus posited in either Gemini or in Virgo is out of luck because these are the signs of the critical, fault-finding Mercury. In other words, criticism destroys love, and where there is love there is no criticism. Each is contrary to the nature of the other. Chaucer is quite technical as he writes these lines, knowing and understanding the *exaltation* and *fall* of planets. I have therefore paraphrased the lines where astrological concepts are concerned, in order that the meaning may be clear to those who are interested in his astrology:

The children of Mercury and Venus
Are in their manners quite different [from each other];
Mercury loveth wisdom and science,
But Venus loveth lavishness and expense;
And because of their different natures,
Each *falls* in the other's *exaltation* [sign];
And so, God knows, Mercury is desolate
In Pisces, where Venus is *exalted*;
And Venus *falls* where Mercury is *exalted*;
Therefore, no woman by a clerk is praised.
The clerk, when he is old, and can naught do,
Of Venus' work, worth his old shoe.
Then sits he down and writes in his dotage,
That women cannot keep their marriage vows.

In the "Knight's Tale," we find the Knight speaks astrology like an educated gentleman of the time, who had doubtless been to Oxford. He talks of planetary hours as though these were something that the rabble among the pilgrims might know all about, but when he tells how Arcite tries to comfort Palamon by saying that misfortune is due to Saturn, and they must endure it and not cry, then he is talking the philosophy of the day. However, Palamon tells Arcite, with tears in his eyes, that his sorrow is due to Venus and not to Saturn. Then the exquisitely beautiful descriptions that the Knight gives, of the temples of Venus, the Moon, and Mars, betray great learning. Jupiter and Saturn also enter the story, and their attributes are accurately ascribed.

The Physician, too, was well grounded in "astronomie," as astrology was called in those days:

He kept a patient wonderfully well
By using [planetary] hours, with his natural [skill or] magic.
He knew just how to calculate a fortunate Ascendant *
For a patient by means of Election charts.

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* The Ascendant of a chart is conditioned by the time of day, hence Chaucer meant that the physician knew how to obtain the best time to administer medicine.

Note, too, the Physician's sources for his great knowledge; apparently indicating that all men of the time included astrology in their medical theories:

> Well did he know old Æsculapius,
> And Dioscorides, and also Rufus,
> Old Hippocrates, Haly and Galen,
> Serapion, Rhazis and Avicenna,
> Averrhoës, Damascene and Constantine.

The Miller tells a story of a carpenter who had as his lodger a young man who:

> Had learned art, but all his fantasie
> Was turned for to learn astrologie.

His room for study is minutely described:

> A chamber had he in that hostelrie,
> Alone withouten any company,
> Full fetishly ydight with herbes sweet,
> And he himself was sweet as is the root
> Of liquorice or any setawale.
> His *Almagest* and bookes great and small,
> His astrolabe belonging to his art,
> His auguring stones laid far apart,
> On shelves couched at his beddes head.

The Lawyer, in his tales of the woes of the Lady Constance, is full of pity because there was no astrologer to guide her;—when she first set sail for Barbary:

> Unfortunate Rising Sign of Short Ascension [Aries],
> Whose ruler [Mars] is in its *fall* [in Cancer], helpless, alas!
> In the Darkest House [the Fourth], and not *angular* in its
>   own [First] House!
> O Mars! O [Evil] Planet now in domination!
> O feeble Moon, disastrous is thy motion!

Thou goest to a conjunction [with Mars] where there will be no *reception*[5] [as there had been formerly],
And from thine original good position [in reception], thou art far removed.

Imprudent emperor of Rome, alas!
Was there no philosopher in all thy town?
Isn't one time better than another in such case?
For this voyage is no Election chart made,—
Especially for folks of high renown,—
Not even when the birthchart is known?
Alas! we are too ignorant or slow!

One would think from all this that Chaucer had taken a chart of an actual person who had started on a journey and had never returned, and that he was reading the essential astrological problems concerned. His question on whether there was no astrologer (philosopher) who could make up an election chart, refers to the ability of an astrologer to set up a chart which would show a journey without trouble. Chaucer is said to have been indebted to the section in John Hispalensis' *Epitome of Astrology* for his knowledge on election charts, though Tyrwhitt thinks some of his knowledge was derived "from a certain Zael."

We get an insight into the way of the alchemists of the period in the story of the Yeoman who worked for a canon of the church. He tells in detail how he and his master made themselves poor in trying to find out how to make silver and gold. We see here that the Yeoman assigned each planet to a metal:

Sol, gold is, Luna's silver, as we see,
Mars iron, and quicksilver's Mercury,
Saturn is lead, and Jupiter is tin,
And Venus, copper, by my father's kin.

One of Chaucer's admirers was John Lydgate (c. 1370-1450), who was born in Suffolk, England. He learned astrology and philosophy at Oxford, and afterwards travelled extensively in France and Italy. In his *Story of Thebes* he tells how the astrologers very carefully and accurately proceeded to cast the horoscope of the infant Oedipus:

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[5] *Reception* refers to two planets each in the other's house.

> the ascendant
> Truly sought out by minute and degree,
> The self same hour of his nativity,
> Nor forgot the heavenly mansions
> Clearly searched by small fractions.

From this latter we can see that the astrology of mediaeval England was no slipshod work, when even the houses had to be calculated to fractions of degrees. It was Lydgate who made a translation of the *Secretum Secretorum* into English.

Chapter 18

ASTROLOGY IN THE FIFTEENTH CENTURY

> *No one can read the history of astronomy without perceiving that Copernicus, Newton, Laplace, are not new men, or a new kind of men, but that Thales, Anaximenes, Hipparchus, Empedocles, Aristarchus, Pythagoras, had anticipated them; each had the same tense, geometrical brain, apt for the same vigorous computation and logic.*
>
> EMERSON, "Essay on Fate"

THE FIFTEENTH CENTURY was the century when America was discovered, but it was also the century when the wealth of knowledge that lay in old books was discovered anew. The past is continually being rediscovered; just as we lay books aside on our own library shelves for years and then one day dip into them, and they seem to shed a new light on everything because in the interim we have grown. Poggio Bracciolini (1380-1459), generally known all over the world as merely Poggio, had to attend a Church conference at the city of Constance in 1414. Apparently, not having much to do, he wandered around the countryside and visited several of the Alpine monasteries, and in these he found a very great number of the old Greek and Roman authors. Among these was a manuscript of Manilius which interested him very much, for Poggio was a good astrologer. Poggio had it copied and when it was given to the world, one can estimate the interest it caused by the tremendous number of commentaries that were written on it. In 1472 it was printed at Nuremberg, from the manuscript that Poggio found, by Regiomontanus. Two years later, Bonincontrius followed with an edition based on a different copy, which he had discovered in the convent of Monte Cassiono. As various other manuscripts were found, Manilius became a "best seller" until late in the 18th century. As we have noted before, it was translated into English in 1697 by Thomas Creech.

The effect of Poggio's obtaining so many manuscripts was to make nearly all the learned men of the period start to comb the continent for more and more old books and manuscripts. As various Greek ones were found, men eagerly sought translators also.

Cardinal Peter d'Ailly[1] (1350–1421) evidently did much toward leading the men of his day to find out what men had thought and written in the past, but he looked forward too. He was the leader of the Nominalist school of philosophers, Chancellor of the University of Paris and Bishop of Compiègne before he became a cardinal. Besides his religious books, he wrote several treatises on astrology, astronomy and all the sciences of the day. He believed, like many of the great Church teachers, that astronomy and astrology were not incompatible with religious belief, and he wrote a book to prove it,—*De Concordia Astronomiae cum Theologia.* His private library was one of the largest. All that had been written on the Calendar was known to him. All that had been written by Gerard of Cremona was in this library. He delved into Adelard and into Roger Bacon's works. He wrote a Commentary on Sacrobosco's *De Sphaera.* It is popularly supposed that it was through the various books he possessed and lectured upon, which dealt with geography, astrology and astronomy and were built around the "arin" theory appropriated by the Arabs from the Hindus, and first given to Europe by Adelard, that Columbus and others developed some of their "scientific" reasons why if one sailed westwards, one would come to land.

Nicholas of Cusa (1401-1464) was the son of a fisherman and became a cardinal. He was educated at Pisa and was quite an independent thinker. He was deeply interested in the Kabbala and said that creation was a never-ending development out of

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[1] His name is variously spelt as Pierre d'Alliac, Petrus de Alliaco, Petrus Alliacus, and Pierre de Eliaco.

God, and not a creation out of nothing. The Kabbala was in every way an opponent of nothingness or of chance being present at creation. If the Kabbala became, during the Renaissance, more and more a predictive system, it was still insistent that the laws on which the world was founded could be known in part, and the present and the future could be comprehended in much the same way that we understand seeds,—recognizable as the basis of the plant, which is only potentially in being, but which is undoubtedly present in the seed. As we saw before, Kabbalism and Neo-Platonism had gone hand in hand in the early Christian centuries, hence we are not surprised to find that when Europe took to Kabbalism, a Neo-Platonic school developed again.

Marsilio Ficino (1433-1499) was the favorite philosopher-astrologer of both Cosimo and of Lorenzo de Medici. Giorgios Gemistus, generally known as Plethon, a Greek refugee from Constantinople, started a revival of interest in the studies of Plato, when he wrote his famous pamphlet in which he compared Plato with Aristotle: " 'The two great philosophers',[2] said he, 'admit that nature works, not by chance, but for a given purpose. Aristotle, however, maintains that this purpose is achieved unconsciously, *non consulto*; Plato, on the contrary, asserts with more justice that nature is rational, is conscious, *consulto agit*; its art is divine, since it is God Himself who works in it. A most burning dispute arose upon this question, which, unimportant as it may seem today, was of immense importance at that time. For it opened the way to pantheism . . .' "

Plethon inspired Cosimo to start an academy at Florence, which should be devoted to the study of Plato. Cosimo took Marsilio Ficino, then a young man of eighteen years, and had him trained in the ducal palace in all the necessary learning that would enable him in the future to become the head of this new Platonic, or rather Second Neo-Platonic School of Europe. Marsilio evidently justified the time and care that was spent on his education. He became one of the leading scholars of the day and had a very wide influence on the times. He translated many of Plato's works. He was tutor to Lorenzo de Medici and also to Giovanni de Medici who afterwards became Pope Leo X. In fact, it was Ficino who made the famous astrological prediction that Giovanni would be pope, and he made the prediction as soon as the child was born. The Academy itself attracted men in all branches of art and science. Lorenzo took part in the meetings as he grew up. Leonardo da Vinci also attended. Then there was Cardan's father, who was a friend of Leonardo, and the two formed the nucleus of a mathematical group within the Academy. "These mathematicians formed a group, lending and borrowing precious volumes." [3] Pico della Mirandola also came under the influence of Ficino until he joined Savanarola, who, though psychic and prophetical himself, and able to predict the fall of Florence, hated astrology. Pasquale Villari [4] describes some of the philosophical views that were current in this Neo-Platonic Academy:

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[2] *See* J. A. Symonds, *Renaissance in Italy* (Charles Scribner's Sons).

> Man is a microcosm; he can descend to the animals, to inanimate nature, or rise to the angels, to God, who will speak with him and guide him. Then too, stars, planets, and even the stones have, by their third essences, direct influence over man's passions, man's destiny. And thus is demonstrated the truth of the occult sciences, in which Ficinus had an almost childish belief. His continual melancholy was attributed by him to the influence of Saturn in his chart.

From 1412-1475 much interest attended editions of Hyginus which were published in Paris, Ferrara and in Venice. Hyginus was a freedman of Augustus Caesar, who had plotted out the constellations. All the old Arab masters of astrology were republished,—Alkindi and Messahala. The old Moorish masters like Abenezra were also republished. In England, not only did Chaucer's son study astronomy and astrology at Oxford but Henry V (1413-1422) studied the same subjects there. One of his astrolabes is still extant. So great was his interest, that he had one made of silver and one of gold. Anatole France tells us in his story of Joan of Arc that the then Duke of Burgundy kept several astrologers, and that one of them, Jean de Builhons, foretold the death and the manner of the death of the Maid. In 1440 we hear of the Duke of Gloucester making astronomical tables.

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[3] R. A. Taylor, *Leonardo the Florentine* (Harper & Bros., 1928).

[4] Pasquale Villari, *Life and Times of Machiavelli* (T. Fisher Unwin).

The King of Poland granted a permanent chair of astrology to the University of Cracow in 1460, and in order that a Polish-born professor might teach the subject properly, a mathematician was sent to the University of Bologna to equip himself for the position. From this we would infer that astrology was well taught in Bologna at that time. In ten years after the return of their professor, the University of Cracow had outstripped Bologna and all other colleges in astrological and in astronomical lore, for students were made to attend both courses, although six professors were needed for the two subjects as the classes became more numerous. And at Cracow University, Copernicus (1473-1543) was in the astrology class as well as in the astronomy class. The records show that he was most interested in finding out everything he could concerning the utility of astrology. Here at Cracow all the works and writings of the Arabs, Jews and Moors were digested, from Alkindi and Albumazar through Abenezra and Ibn Tibbon. In Manilius and also in the works of the Pythagoreans, they had found hints of the Sun being the center of the planetary system, and of the earth having an axis, but it was Nicholas Copernicus who finally gave forth the "new" theory. So, if the King of Poland had not given this astrological chair to Cracow, the world might have waited a little longer for the Copernican theory of the solar system to eventuate. One of Copernicus' greatest friends and his major adviser was Regiomontanus, whose real name was John Müller (1436-1476). He was born in Königsberg, Prussia, and studied both astrology and astronomy at the University of Vienna, under George von Purbach. A very close friendship grew up between the two men and Regiomontanus became interested in all the translation work which Purmach thought necessary for the progress of his research. In Vienna, Purbach in 1457 published the first printed almanac entitled *Pro Pluribus Annos*. He did not confine his data to one year. Regiomontanus followed the same idea in 1475 when he brought out an almanac that was good until 1531.

From Vienna, Regiomontanus in 1461 accompanied Cardinal Bessarion to Rome. Bessarion was one of the Greek exiles of the period and his rare knowledge of Greek was invaluable to the men of the Renaissance. At one time he had studied under Plethon. It seems that Bessarion gave a copy of Ptolemy's *Almagest* to Regiomontanus. This gift appears to have been lost or stolen later on, but not until Purbach and Regiomontanus had made their translation, which was, however, not an entirely complete one, but, rather, in the nature of a very full summary and digest. Regiomontanus was at one time astrologer-adviser to the King of Hungary. Later, he settled in Nüremberg, where he published Tables of Directions, that is, trigonometrical tables helpful to astrologers and astronomers. He was able to make very long-distance predictions. Writing in the year 1475 he said that the year 1588 would be a very important year for Europe. The year 1588 coincided with the defeat of the Spanish Armada, the overthrow of the Emperor Maximilian, the death of the King of Denmark (Tycho Brahe's friend), the flight of the King of France from Paris and terrific struggles in Poland for the throne.

The name of Regiomontanus is well known to astrologers everywhere because of the system of house division to which he gave his name. House division is one of the most hotly debated subjects in the astrological world. Of course in none of the systems is there any argument about the Midheaven and the Ascendant (including the Fourth cusp and the Descendant), but as regards the other cusps, different astrologers follow Porphyry, Campanus, Placidus, or Regiomontanus. The modern scientific schools of astrology in Europe still follow Regiomontanus, but the English and American schools generally follow the Placidean methods, though they may experiment with the others.

Matthew Campanus and Joseph Campanus were physicians of the fifteenth century. Both were interested in astronomy and in astrology. Both experimented with house divisions and both published tables of houses, in Rome in 1495.

Trapezuntius was, like Cardinal Bessarion and Plethon, a Greek exile. He translated the *Physics and Metaphysics* of Aristotle, and also some of Plato's works. He had such violent quarrels with Poggio over some of the translations that the quarrels at times ended in blows. He was a great mathematician, astrologer and astronomer. His name appears on the title page of the translation of Ptolemy's *Almagest,* which was published in Venice in 1525, but actually Lucas Gauricas, whom we shall mention later, did the work both of translating and editing, Trapezuntius merely offering advice and suggestions on difficult problems.

Besides being the author of the *Almagest* and the *Tetrabiblos,* Ptolemy was the author of a treatise on Geography, and this *Geographia* was translated, although no printed edition in Latin was available until 1462. In this, Ptolemy gave the latitude as well as the longitude of all the main places of his time. He placed some of them so very correctly that people in modern times have wondered how he did it, but one of the main errors he made was in the longitude of the Canary Islands.[5] He said they were situated at 180° West Longitude. As the Canary Islands became better known, seamen noted the error, but popular feeling that Ptolemy must be right was so strong in the fifteenth century, that if the Canary Islands were not where Ptolemy said they were, then these were not the islands he meant, and some other land or islands must be at 180° West Longitude. This gave rise to various suggestions that someone ought to go and find out.

America owes much to Samuel Zacuto (1450-1510), for it was Zacuto's ephemerides that Columbus used on his journey to America, and it was in these that Columbus was able to note the eclipse of which he made such good use. Zacuto was a Jewish-

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[5] Smith's *Dictionary of Greek and Latin Biography.*

Spanish astrologer, historian and mathematician, who turned his attention to making star tables and ephemerides. He was quite inventive and improved the astrolabe. Some of these he made of iron and one of them was used by Vasco da Gama. He wrote a treatise on astrology. Unfortunately, persecution set in against the Jews in Spain. Zacuto used his influence with Manuel of Portugal, whose sea captains were glad to have Zacuto among them. In this country, then, Zacuto and the Spanish Jews found refuge for a while. Later, the King of Portugal gave them the alternative of slavery or baptism. Zacuto wanted neither, so he fled first to Tunis and then to Turkey, to escape Christian persecution. We might note with interest here that astrology was still a subject of great study in Turkey, even after the Turks captured Constantinople in 1453. Elijah Bashyazi (1420-1490) lived in Constantinople, where his studies in mathematics, astronomy, astrology, philosophy and religion were carried on. Also Caleb Afendopolo (1454-1523) was born in Adrianople but went to Constantinople. He was an astrologer, astronomer, geometrician and philosopher.

Contemporary with Zacuto in Spain was Ibn Verga (died c. 1497), who was an astrologer and kabbalist. He also fled from Portugal from the Inquisition, but unlike Zacuto was unable to make his escape, and was put to death. About the same time (1437-1508) lived Don Isaac Abravanal. Born in Lisbon, he fled to Venice during the persecution. He was a mystic, statesman and astrologer. However, he seems to have been quite misguided in his prediction of the coming of the Messiah and the Messianic Age, for he calculated the former for 1503 and the latter for 1531.

Count Pico della Mirandola (1463-1494), son of the Prince Mirandola, is said to have attended no less than nine universities in his quest for learning. As we have seen, he was one of the followers of Marsilio Ficino at the Platonic Academy of Florence. Let us see what manner of man this was who later in his life made the great invectives against astrology. Villari says of him:[6]

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[6] Pasquale Villari, *Life and Times of Machiavelli* (T. Fisher Unwin).

His acquirements, though extensive, were superficial, his judgments dictated rather by enthusiasm than critical faculty. He considered the poems of Lorenzo de Medici superior to those of Dante and Petrarch. Of the majority of the twenty two languages he was supposed to have studied, he knew little more than the alphabet and the elements of grammar. He was, however, one of the first promoters of Oriental studies, as well as one of the best Greek and Latin scholars. But neither his Italian and Latin writings, much less his philosophy, show any marks of originality. He tried to reconcile Averrhoës and Avicenna, Scotus and St. Thomas, Plato and Aristotle, in order to combat the enemies of the church. This, of necessity, brought about his union with Ficino, who desired to fight "the religion of ignorance, and the philosophy of unbelief."

At first a friend of the Medici, he ended by being an enthusiastic admirer of Savonarola.

As Pico left Marsilio Ficino he turned against astrology with such bitterness that he became known as Flagellum Astrologorum, or the scourge of astrologers. Lucius Bellantius of Siena, one of the well known astrologers of the time and a good astronomer, who wrote *Defensio Astrologiae,* delved into Pico's horoscope and made the prediction that Pico would die in his thirty-first year,—which came to pass. It is interesting to note that in spite of all he did against astrology and astrologers, he himself had to answer the charge of heresy, and he was not acquitted until the year before his death. Pico too, though he renounced astrology, maintained a very definite belief in Kabbalism, because he said the understanding of Kabbalism would help to convert the Jews to Christianity. As the chart of Pico[7] is still extant, it is easy for any good astrologer today to see why Pico's thirty-first year would be likely to result in death. His book against astrology, *Adversus Astrologos,* was ably answered by Pontano in his *Rebus Coelestis.* Pontano, or Jovianus Pontanus, was an able astrologer, chiefly known for his illuminating Commentary on Ptolemy's *Centiloquy.*

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[7] *See* Index.

Paracelsus (1493-1541) was a Swiss physician. He studied at Basle University and learned alchemy, astrology, kabbalism and chemistry from Trithemius, Bishop of Würzburg. He then went to the school mine at Schwartz, where a number of chemists, and alchemists, were busy researching on ores. Paracelsus realized that he was not interested in this work, so he turned his attention to medicine and made bitter complaints against Hippocrates, Galen and in fact all the doctors of the day. Sometimes he would write invectives against the astrologers of the day, but he still believed that astrology had its right and proper place if it were in the hands of people like himself. He said, "The Sun and the stars attract something from us, and we attract something from them, because our astral bodies are in sympathy with the stars." Mystical, violent and iconoclastic, Paracelsus was much hated in his day, but his very violence stirred men up to new efforts in research.

Chapter 19

ASTROLOGY IN THE SIXTEENTH CENTURY

That saying, "A wise man shall rule his stars," is not to be understood of the external stars in the Heaven or Firmament of the great world, but of the internal stars. . . . The stars over which we ought to rule, if we will be true wise men, are all the cogitations, speculations, cupidities, affections, etc., ascending by imagination, out of our hearts, . . . and tending by free will and reason to abuse and pleasure.

VALENTIN WEIGEL, *Astrology Theologized*

I HAVE demonstrated that Dante's basic framework was a combined Kabbalistical-astrological theory. Maestro Gaio (Moses ben Isaac Rieto, 1388-1460), Rabbi of Rome, used much the same scheme in his *Mikrash,* a poem describing a journey through the planetary heavens. Gaio was a well known character of the period, endowed with many gifts. As a historian he wrote the history of the Jews down to his own time, and as a physician-astrologer, he was employed by Aeneas Sylvius Piccolomini, who was interested in all phases of the new learning, and who later became Pope Pius II (1458-1464). I think it is important to bear in mind, when considering the fact that most of the popes of the Renaissance employed astrologers, and physicians having astrological knowledge, that practically every prince in Europe at that period employed an astrologer, and that astrology was a part of medical practice.

If it is thought that physicians of that time were not astrologers, I might mention that Dr. Len Broughton, a physician and astrologer of New York (1828-1899) says in his *Elements of Astrology:*[1]

Dr. Lambert of London, England, has lately published a book on the practice of medicine, and in it attempts to prove the great advancement that science has made within the last 200 years, and gives as an illustration, that formerly when a student came up for his final examination previous to getting his diploma, he was generally asked the following question: "If you are called to the bedside of a sick person, where would you look for the disease?" The student is made to answer: "In the sixth house."

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[1] *Elements of Astrology,* by L. D. Broughton (New York, 1906).

This, of course was the sixth house of the horoscope, showing that the study of the patient's horoscope was general until the seventeenth century.

Sixtus IV (1471-1484) used planetary hours for fixing all important dates and receptions. Alexander VI (1492-1503) thought that the prophecies of Cardinal Bianco were the most reliable of all astrological judgments of the period, and he had many of them written out. Julius II (1503-1513) was in Bologna when he received the announcement that he was to be pope. He asked his astrologer to elect the right time for his journey to Rome, and also the right time for his coronation. Leo X (1513-1521) was Giovanni, son of Lorenzo the Magnificent, of whom Marsilio Ficino had predicted that he would be a pope. Leo had at his court Lucas Gauricus, an astrologer and Greek scholar who edited and translated the edition of Ptolemy's *Almagest,* which had been conceived by Trapezuntius. This was not published until 1525 but it was begun under Pope Leo's auspices. We are indebted to Lucas Gauricus for preserving the horoscopes of many of the well known people of the period. One book of his containing charts of such people was published in 1522, entitled *Tractatus Astrologicus*. It was reprinted in 1542. Then there was his *Opera Omnium,* which came out in 1575. Lucas predicted a violent end for himself. He died when a heavy book in his library fell on his head. We might compare his death with that of Michael Scot. Gauricus worked at the court of Clement VII, who furthered the publication of both astronomical and astrological treatises. Paul III (1534-1549) made his astrologers calculate the best days for his conferences. His interest in all the sciences of the day is seen when we find that Copernicus dedicated to him his book on the new theory of the universe.

In all, it was a period when if the interest in astrology had not been so great, Copernicus, and the other astrologers and astronomers of the time could not have come to the front. Even those who had no desire to overthrow the Ptolemaic system, hailed anything that could or would give greater accuracy in the calculation of horoscopes. The Renaissance was in many ways a very practical period. If a person knew anything intellectually, he wanted to see it put into some phase of practical demonstration. It was this spirit that inspired Columbus in the discovery of new lands. It led to new vistas. If, as J. A. Symonds says, it was an age when cardinals could be called "augurs," it was also a period when the future was just as important as what was past and what was present.

The Renaissance has been called a period when all the resources of art as well as of science were directed towards the dissemination of astrological knowledge and beliefs. This is only partly true, for astrological knowledge had been disseminated by major artists and scientists from ancient Egyptian and Babylonian times, down through the Greeks and Arabs, and all through the early Christian period too. Churches, chapels and cathedrals had been outvying one another for centuries in all kinds of astrological symbolism. The signs of the zodiac were engraved on the walls of the Church of St. Gereon at Cologne in the eleventh century. One of the great portals of Amiens Cathedral (1220-1228) displays the signs of the zodiac. In this, Scorpio appears as a kind of six-legged tortoise with a fish's tail. St. Margaret's of York has the twelve signs of the zodiac decorating the porch. The Renaissance artists merely followed in the paths of earlier artists who had already given glory and dignity to astrological concepts. Raphael (1483-1520) painted the planetary hours. He also painted the Vision of Ezekiel, showing God surrounded by the four fixed signs of the zodiac; the Bull, the Lion, Eagle and Angel. The Books of Hours of the period gleam with beauty when illustrating the four gospellers as the four fixed signs. In the South Kensington Galleries and in the Metropolitan Museum of New York, I have seen the most exquisite enamels of the Renaissance period, with the four gospellers portrayed in this way. I have also seen them on the carved panels of oaken chests, and all this work was done by men who were not trying to belittle the gospellers, but to assign to them the eternal attributes of Living Intelligences, who, the artists believed, were established in the heavens from the creation of the world, and who still shine steadfastly, night after night, throwing their glory of light on all mankind. Guido Reni paints St. Michael the Archangel with the Balance of Libra held in the angelic left hand. Albrecht Dürer (1471-1528) made forty-eight drawings to illustrate an edition of Books Seven and Eight of the *Almagest,* which had formerly been translated by Trapezuntius. Also, we find among his etchings one called Melancholia, which is one of the finest expositions that has ever been made graphically, of Saturn exalted in Libra, leaving one to wonder who his teacher of astrology was. Here are all the symbols of Saturn,—hour glass, magic square, curfew bell, ladder and compasses. Here is Libra, portrayed as the setting Sun,—and Libra's ruler, Venus, is symbolized by Cupid. Saturn in Venus' sign, Libra, is the great meditative angel. At the feet of the angel is the globe, ball, or apple of Venus, symbolizing the Earth. Furthermore, the lamb of Aries (the morning sunrise) sleeps peacefully while the western sun sets. And all this is woven together in one unit. Our modern artists would call all these symbols ornament, but to Dürer they were not just ornament. They were of the very texture of his mind. They were concepts vital to his expression. If he didn't know his astrological symbolism perfectly why does he let Aries sleep while the setting Sun dominates? Perhaps we should note here that the meaning of Melancholia has changed in the last few hundred years. Whereas formerly it meant profound thought, it now inclines to mean pessimistic thought. Saturn exalted in Libra means the former,—thought that is still Venusian, still able to maintain its poise, in spite of difficult problems of experience, because it has arrived at a complete understanding of the essential justice of the eternal wisdom, and this eternal justice is inherent in the inner meaning of the sign Libra.

Benvenuto Cellini (1500-1571), one of the great artificers in silver and gold, writes in one of his calmer moments in prison that he believes that people have a certain destiny but that God at times overrules the influence of the stars.

Michelangelo (1475-1564) when he would make a statue of Moses as the Lawgiver, endows him with the horns of a bull. I have heard it stated that Michelangelo had seen a statue of Jupiter Ammon with horns and that he is here giving Moses the horns of Jupiter Ammon. To me this sounds more than trite. Michelangelo was no imitator. The horns are symbolical of Taurus and, to astrologers, Taurus is the sign of substance. To the Kabbalists, Taurus represented all that is comprehended in Torah, the law—both the laws of God and the inevitable laws of nature. Thus the massive book of the law, under Moses' arm, is one symbol of the law as it has been known, written down, and systematized from ancient times, but the fact that the law has been comprehended by Moses in its most divine essentials, is symbolized by putting horns on his head—the seat of the *nous* or subliminal intelligence, the place where God speaks to man. It has always been believed by students of the occult, both in Europe and in the East, that there was a gland in the head (the pineal) which opened (like a lotus leaf) when spiritual exercises were performed, and when it opened, God could speak directly to a person. All this did Michelangelo wish to convey when he gave Moses the horns of the bull. I remember one time giving a lecture on this portrayal of Moses, and at the end, a lady got up and said she was grateful for the explanation. She said, "When I saw those horns I was shocked and horrified. I thought that only the devil had horns, and when I saw them on a holy man out of the Bible, —I felt as if there was nothing left held sacred by artists.

Who, after Michelangelo, could horn the lawgiver Moses?

No one. Because the idea was gradually instilled into artists to be "true to nature." But is this statue any less Moses because it has horns? No, the horns exalt the figure by the very intensity and fervor of Michelangelo's understanding of the process of divine revelation. His studies in the Kabbala and in astrology had provided him with a knowledge of what I might call "divine anatomy." He knew that within the head was the "door of the Lord," which opens and shuts as God speaks. He understood the whole mystical significance of what Job (Ch. XXIX:3) calls "the candle of the Lord upon the head," and he understood the meaning the "horns of the law," and he had the courage to put all that he knew into reality. Not until an artist today can feel and know that these things are actualities in divine experience can he put horns on Moses without making comedy and mockery. Michelangelo was "true to nature," true to a "nature" which includes, not merely the physical body, but a spirit within a man which is able to speak with God.

Pietro Pomponazzi (1462-1525) reflects some of the thought of his period in his *De Fata* and his *De Incantatione*. In the latter book, he says that all things in this universe are subject to planetary law, even the rise and fall of various religions. This latter thought Pomponazzi probably derived from reading Albumazar or commentaries on Albumazar, who had translated the Persian Al Hakim's book on the Conjunctions of Jupiter and Saturn from which he had foreseen the rise of both the Christian and the Mohammedan religions. Pomponazzi goes on to say that great changes were already coming over the Christian religion,—and, in view of the approaching Reformation, he was right.

Among the reformers Luther was strongly against astrology, but Erasmus was more moderate, usually replying to questions on whether there were planetary spirits, "only God knows." Erasmus did not believe in the sphere beyond the Primum Mobile. In his *Praise of Folly*[2] he remarks that the theologians invented it so that "happy spirits might have room enough to take a walk, or play at ball." Melanchthon, however, was a firm believer in astrology and he and Luther had many heated arguments on the matter. Luther nearly always used the same argument as St. Augustine,—twins! Were not Jacob and Esau, he demanded, born under the same star? Philipp Melanchthon (1497-1560) was related to Reuchlin, whom we have mentioned previously, and who had been friendly with Pico della Mirandola, and like him interested in the Kabbala. Reuchlin was also a friend of Trithemius, who studied both the Kabbala and astrology, and who had taught these matters to Paracelsus. Reuchlin helped Melanchthon in his studies, first having him sent to Heidelberg and then to Tübingen, where astronomy and astrology were well taught. It was when Melanchthon went as Professor of Greek to Wittenberg through Reuchlin's influence, that he became acquainted with Luther, and they discussed their views on all subjects. Melanchthon was a friend of Joachim Camerarius, who published a Greek edition of Ptolemy's *Tetrabiblos* in 1535. Melanchthon read it and decided that a Latin edition was necessary. He accomplished this in 1553.

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[2] *See* F. Seebohm, *Era of Protestant Revolution* (Longmans, Green & Co., 1904).

In France, there was Michael Nostradamus (1503-1565). He became physician to Henry II of France and later to Francis II and Charles IX. (He is not to be confused with Dr. Michael Nostrandum (1503-1566), of the English Royal College of Physicians, who made almanacs with quite notable predictions. Rabelais had published an almanac in 1533, which was for one year only, unlike the almanacs of Purback and Regiomontanus; and Nostrandum followed the method of Rabelais.) The French Nostradamus began his well-known prophecies in 1555, putting them into a thousand doggerel verses. They prophesied the rise to power of Oliver Cromwell in England, the birth of Napoleon, also our more modern wars, and other wars still to come.

One of his prophecies was concerning the Great Fire of London, which occurred September 2, 1666, a hundred years after the death of Nostradamus. The translation of the doggerel reads:

The blood of the just requires,
  Which out of London reeks,
That it must be razed with fires.
  In year three score and six
The ancient Dame shall fall
  Down from her place on high,
And of the same sect shall
  Many another die.

This prophecy foretold the burning of heretics by Queen Mary. The "ancient Dame" is old St. Paul's Cathedral, which at one time was the site of a temple to Diana.

Nostradamus also made predictions for Catherine de Medici while she was Queen of France, but her favorite astrologer was Cosmo Ruggieri. Honoré de Balzac, in his book *Catherine de Medici,* speaks of the notable influence Cosmo had on the destinies of France. He says:

> Two words will summarize the strange woman [Catherine, 1519-1589], so interesting to study, whose influence left such a deep trace on France. These two words are dominion and astrology. Catherine de Medici was excessively ambitious; she had no passion but for power. Superstitious and fatalistic, as many a man of superior mind has been, her only sincere belief was in the occult sciences. Without this two-fold light, she must always remain misunderstood: and by giving the first place to her belief in astrology, a light will be thrown on the two philosophical figures of this study.
>
> There was a man to whom Catherine clung more than to her children; this man was Cosmo Ruggieri. She gave him rooms in her Hotel de Soissons; she also made him her councillor, instructing him to tell her if the stars ratified the advice and common-sense of her ordinary advisers.
>
> Certain curious facts justified the power which Ruggieri exerted over his mistress till her last breath. One of the most learned men of the sixteenth century was, beyond doubt, the physician to Catherine's father, Lorenzo de Medici, Duke of Urbino. This leech was known as Ruggieri the Elder . . . to distinguish him from his son Ruggieri,

> called the Great by writers on the Kabbala, and Cosmo Ruggieri, Catherine's astrologer.
>
> The elder Ruggieri . . . in this capacity of mathematician, astrologer and physician to the Ducal House, three offices which were scarcely distinguished,—cast the horoscope of Catherine's nativity, in consort with Bazile, the famous mathematician.
>
> At the beginning of the sixteenth century, Ruggieri the Elder was the head of that secret college whence came Cardan, Nostradamus, and Agrippa, each in turn physicians to the Valois; and all the astronomers, astrologers, and alchemists who at that time crowded to the courts of the Princes of Christendom, and who found especial welcome and protection from Catherine de Medici.
>
> In the horoscope cast for Catherine de Medici by Bazile and Ruggieri the Elder, the principal events of her life were predicted with an accuracy that is enough to drive disbelievers to despair. This forecast announced the disasters, which during the siege of Florence, affected her early life, her marriage with a Prince of France, his unexpected accession to the throne, the birth and number of her children. Three of her sons were to reign in succession, her two daughters were to become queens; all were to die childless. And all this was so exactly verified, that many historians have regarded it as a prophecy after the event.
>
> It is well known that Nostradamus brought to the Château of Chaumont, whither Catherine went at the time of La Renaudie's conspiracy, a woman who had the gift of telling the future. . . . Now, in the time of Francis II, when the Queen's sons were little children and in good health, before Margaret de Valois married Henri de Bourbon, King of Navarre, Nostradamus and this soothsayer confirmed all the details of this famous horoscope.

We might mention here that Henry of Navarre's death was predicted by a Tuscan astrologer named Francisco Corvino. Whatever we may think of Catherine de Medici, she was interested enough in the subject to have an observatory erected near Paris, where observations could be made.

Let us next turn to the second member of the secret college of which Balzac speaks. Jerome Cardan (1501-1576) was one of the most versatile men of the time. Besides being a kabbalist, he was a mathematician who found out how to solve cubic equations. He took the lead in all problems relating to algebra. He was one of the best astrologers of the period, and he was the most renowned physician of Europe, being called upon by kings and princes from all countries to diagnose and to heal them. At one time he journeyed to England to the court of the very delicate Edward VI. There the courtiers asked him what was the probable length of life of the young king. Cardan tells us in his *Autobiography* that after he had met the courtiers, and also realized what might happen to men who predict the death of kings, he decided not to make any statement. However, the Archbishop of St. Andrews in Scotland was very ill, and Cardan journeyed there and cured him.

He was born at Pavia and educated at Padua. Thus we see that Padua still taught medicine and astrology as allied subjects. In 1534 he obtained the chair of mathematics at Milan, and we have to remember that mathematics to a large extent meant knowledge that was necessary in astronomy and astrology. Later, he taught medicine at Pavia and at Bologna. Here he was imprisoned for applying his astrological knowledge to making a horoscope of Jesus Christ, yet Cardinal d'Ailly had calculated such a chart without imprisonment. When free, he went to live at Rome, where he became private physician to Pope Gregory XIII, who gave him a pension. Besides his books on medicine, we are indebted to him for his *Astrological Aphorisms,* which are still extant and which are in constant use by astrologers. He preserved for us many of the charts of notabilities of the period. Cardan's *Works,* edited by Sponius in Lyons in 1663, filled ten volumes. In 1684, the English astrologer, John Gadbury, published a book giving his theories on cardinal signs under the title *Cardenes Coeli,* but William Lilly had already translated and published his *Aphorisms*. From Cardan's *Autobiography* we find that he diagnosed all his patients by means of astrology. Henry Morley wrote a good biography of him in which, though he disapproves of his astrology, he faces the fact that Cardan was an astrologer, which is certainly a straightforward way of going about things, and does not betray the lack of historical perspective and the bias of a later writer, who presumes to write a biography of the great astrologer-physician leaving out the most essential factor in his life—that he was an astrologer. Perhaps the lady thought she was "whitewashing history," but such an occultation of the most important factor in Cardan's work is not history at all.

The third member of this occult college mentioned by Balzac was Heinrich Cornelius Agrippa of Nettesheim (1486-1535), one of the strangest characters of the Renaissance, employed for a while as personal astrologer to the Emperor Charles V. Agrippa was a soldier, cleric, kabbalist, astrologer and physician. He was born in Cologne and later taught theology at Dôle in Franche-Comté in the Netherlands, which Charles as grandson of Ferdinand and Isabella had inherited. It seems that Charles dismissed Agrippa, not because he was incorrect, but because he was too pessimistic in his readings. One can understand that Agrippa had no easy task in trying to be cheerful when reading for Charles, for Agrippa could look too far ahead to appreciate the emperor's immediate success. The charts showed great success over a period of years but final dissolution of all the emperor had won,—and abdication. Charles conquered Francis I on the field of battle at Pavia, and actually captured the French king. This made Charles the most powerful prince in Christendom and even overlord of Italy, and in 1527 he sacked Rome. But Charles became involved in the worst of all religious wars and finally had to give up all his kingly and imperial offices. Agrippa's pessimism was vindicated.

In 1528, Agrippa first published his *De Occulte Philosophia,* and a new edition was necessary in 1531. This book puts forth his Kabbalistic theories. In the second book of this *Occult Philosophy,* Agrippa gives various drawings showing man's proportion to the circle, square, pentagon, and also to the twelvefold division of the circle and square. It is a book which should be of value to artists, but I should think it was written chiefly from his studies in medicine and anatomy, to show graphically the connection and interplay of forces between various parts of the body, and how they affect one another. For example, we know there is a definite interplay of forces between the head and the stomach, for if one is upset there can be a reaction in the other part. In the Zodiac, Aries, which rules the head, is in square aspect, or 90 degrees apart from Cancer, which rules the stomach. Agrippa shows how an interplay of forces affects all signs which are square to one another, and also opposite one another. All this had been known for centuries, but Agrippa lays it out diagrammatically,—without much explanation, so that "he who runs may read."

Agrippa argues that, since man is made in the image of God, man therefore contains all numbers, measurements, weights, notions and elements within himself, and since the measures of all parts of man's body are in proportion to the Archetype, everything in man must correspond in some way to everything in the world that has been created by God,—and this will *include some motion proportionate and comparable to the motion of the stars.*

With regard to this secret college of which Balzac speaks, there may or may not have been one. I am afraid the concept of a secret college raises in the minds of people of today visions of men dressed up in queer ceremonial clothes and meeting in inaccessible mountain retreats. I should, rather, be inclined to suppose that a few men, highly skilled in much the same studies, did as they might do today,—borrowed and lent rare books and then, at convenient times, conferred or wrote to one another,—just as we saw with the mathematical members of the Platonic Academy founded by the Medicis. In fact, the "secret college" to which Agrippa and the others belonged may have been just a continuation of this group, for Cardan's father was in the Academy itself. Doctors and artists were more closely associated in the Middle Ages than they are today, for artists attended the anatomy classes, and since doctors studied astrology, we can readily see that artists might do so also. R. A. Taylor says:[3]

> In 1472 Leonardo's name is entered in the Red Book of the Company of Painters in Florence as being admitted to membership. The painters of Florence were enrolled among the Guild of Physicians and Apothecaries. The Company of St. Luke had its *residenza* in the great hospital of Sta. Maria Nuova, which Leonardo used as a bank for money and a school of anatomy.

Not that I am claiming Leonardo as a believer in astrology. It would be hard to allow that he believed in anything, but he always wanted to know everything. The same author says:

> He mocks at astrologers and necromancers, yet some quaint experimenter in the occult is usually among his intimates.

Franciscus Junctinus (Giuntini, 1522–1590) was a well-known astrologer who believed in the doctrine of free will, saying: "Contra Fata valuit Deus, et prudentia tantem, vir pius et prudens vincere fata potest," or God can prevail against Fate; and by means of forethought, a good and prudent strong man can conquer destiny. Junctinus was born in Florence, but he lived in Lyons, France, most of his life. He is chiefly known for his *Speculum Astrologiae,* two large volumes of the horoscopes of great men, which appeared in 1583. These have preserved data and horoscopes which would otherwise have been lost.

Among the other definitely astrological literature[4] which appeared in the sixteenth century was an edition of Omar Tyberiadis' *De Nativitatibus,* in 1525, an edition of Marstallerus' *Artis Divinatricis,* in 1549, and a book on the twelve houses of the heavens by Orontius Finaeus, at Paris in 1553. Of this latter person, Ashmand says:[5]

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[3] *Leonardo the Florentine* (Harper & Bros., 1928).

[4] *See* Appendix XI.

[5] *Ptolemy's Tetrabiblos,* trans. by J. M. Ashmand (Foulsham).

In France about the beginning of the sixteenth century, Oronce Fine, the Royal Reader, attempted, under the patronage of Francis I, to produce an astronomical clock, in which everything moved according to the principles of Ptolemy. It was kept about fifty years ago in the monastery of St. Genevieve at Paris.

Cyprianus Leovitius (1524-1574), born in Bohemia, was credited by William Lilly as having been the first to systematize and standardize all the various astrological methods that impinged on Europe from all sources. He wrote *Concerning the Major Conjunctions* and *On Eclipses.* He reprinted Regiomontanus' *Table of Directions,* and he made ephemerides. He is accused of having thought the world would come to an end when the Jupiter-Saturn conjunction would start in Fire signs, that is, in 1603. As we have remarked before, this term "end of the age" and "end of the world" are not synonymous. In any case, he would have been wrong in using the "end of the age" for the termination of Jupiter-Saturn conjunctions in Water signs, as the phrase "end of the age" refers to the precessional change of signs.

Valentin Weigel (1553-1588) wrote *Astrology Theologized.* This was reprinted in London in 1649. Anna Kingsford had another edition made in 1886. Weigel's contention seems to be that, as regards a man's physical body and general make-up, this is under planetary influence, but not exactly from the stars in the heavens, but rather because the same cosmic force that moves the stars is within man. The heavens at the time of a man's birth are, so to speak, merely a mirror, wherein man can see objectively what he is like and what matters will affect him and be part of his destiny. When man, however, awakens to the fact that he is a spiritual being, then external conditions are transmuted by the Spirit of God, and a new motivation is set up which alters the general trend of destiny.

I think Weigel means that the astrology that needs "theologizing," is the astrological fatality as apparently shown in the mirror of the heavens. The human mind sometimes receives a flash of knowledge, intuition or spiritual help which puts a new complexion on things. The destiny of man can be altered through effort. For example, a man cannot become a dentist until he passes his examinations. Before that, he may have potential desires to become a dentist.

John Napier (1550-1617) is not to be confused with Lord Napier who fought against Napoleon. John Napier was Laird of Merchiston (or Marchiston), near Edinburgh. He was educated at St. Andrews and also on the Continent. He became interested in astrology and speaks of it as a "true science." It is said that he invented logarithms in order to simplify the calculations necessary in making horoscopes. Logarithms were first called "Napier's bones," or "rods."

Napier had many other ideas, which never came to fruition during his lifetime. One was a military machine, "a chariot of metal, with shot coming out from men and machines inside" (our tanks!). Whether the idea was original with him, I doubt, for Ralph Rabbards had previously petitioned Queen Elizabeth to make a "fiery chariot without horses to runne upon the battaille field and disorder it." He also suggested "a vessell without oars or sayles . . . swifter than any that had been seene." Good orthodox scientists of the day thought all these ideas the crazy dreams of lunatics.

William Lilly tells us that when Napier, or Marchiston, as he calls him, made public his logarithms, Mr. Briggs, then reader of Astronomy at Gresham College, London, was so surprised with admiration that he went to Scotland to see him, and when he met Napier he could not speak for nearly fifteen minutes, so overcome was he with joy and admiration at meeting a man who had thought out such a magnificent mathematical scheme. Then, every summer afterwards Briggs spent his summer vacation with his new friend. Evidently they were very happy together, in spite of the fact that "Marchiston was a great lover of astrology, but Briggs the most satirical man against it."

Lilly also makes this statement in praise not only of Napier but of other men, of the later Elizabethan and early Stuart period:

I have had much acquaintance and society with Scnollers of other Nations, reputedly learned in Astrologie in their own Countreys, but I really affirm, that none of them were comparable to that grave, reverend and profoundly learned Dr. Napier,[6] or his surviving kinsman Sir Richard Napier, Knight, exceedingly judicious in Astrologie, Physic, and Philosophie, or to Mr. Thomas Allen of Gloucester-hall; or to Mr. Bredeon, a rigid Ptolemain, or to Mr. Nicholas Fiske, curious in the art of directions and exquisite in all parts of Astrologie. Let them show me a man that hath given better proof of his judgment in Astrologie than my friend Mr. Booker in his Annuall Prognosticks."

Leo Allatius (1586–1669) was a Greek born in the Island of Chios. He was educated at the Greek College in Rome, and was so proficient in all matters pertaining to books and manuscripts that he was made librarian to the Vatican in the time of Alexander VII. Like nearly all the scholars of the time he was interested in astrology and believed that adequate data and books were necessary. He became one of the great translators of the seventeenth century, and he both collected and edited old manuscripts and texts. One of the texts he translated was Ptolemy's *Tetrabiblos,* or rather the Greek Paraphrase which had been made by Proclus.

Der Hohe Rabbi Löew (1520-1609), sometimes called Rabbi Low of Prague, always seems to conjure up ideas about magicians. People said he was a magician and able to make the Golem, that is, a robot creature, which could be imbued with temporary life and made to do the magician's bidding. Löew was born in Posen and then went to live in Prague, which at that time was one of the intellectual centers of the world. Tycho Brahe, Kepler, Longomantanus and Betius all resided there, and Rabbi Löew, though he was confined to the ghetto, had a small observatory built in his home, and all these scientifically minded men came to visit him and partook of some of his ideas and discussed their own ideas with him, for Löew was not only a great talmudist, but also an astrologer and a mathematician. Among this group at Prague was David ben Solomon Gans (1541-1613), an astronomer-astrologer, who was particularly friendly with Tycho Brahe. In 1592 the Emperor Rudolph II called Löew to the court, where all the alchemists, mystics and astrologers of the period were invited to meet him. The meeting was held in secret and from that time until now speculation has gone on indefinitely as to what happened at this meeting, but no one has ever given any very authentic statement on the matter. It is one of history's secrets.

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[6] *See* next chapter.

A castle specially built and equipped for an astrologically minded astronomer sounds almost too good to be true, yet it came to pass when a King of Denmark built the castle of Uranienborg for Tycho Brahe, who lived there for twenty years. Tycho was somewhat like Dante in closing one age of history in a glory of a setting sun, for Tycho had studied the new Copernican system but did not entirely believe in it. He worked to reconcile some of the old findings of Ptolemy with the new findings of Copernicus,—a compromise of systems which is called the Tychonic system, wherein the Copernicans were not to be allowed to have it all their own way. Tycho stands out, a bold and warring spirit, in the days when the glory of the Ptolemaic theories was fading rapidly. The great Ptolemaic system, which was believed to be a fundamental part of religion,—the system on which philosophy had woven great traditions, and on which artists and scientists of the ages had lavished their work, was dying. Brahe is almost like a knight errant, prepared to give his life to save some of the structure, for Brahe was not just a cold and calculating astronomer, he was an ardent astrologer and he was an alchemist, and he had studied medicine in the light of astrology. What his final message was we do not know, for his pupil Kepler, with the best intentions in the world, destroyed many of his manuscripts. Tycho justified the astrological dictum that a man with Saturn on his Midheaven will attain great glory but will suffer a downfall. He was born at Knudstrup, Sweden, at 10:47 A.M., December 14, 1546 (O.S.), or, according to the Sloan MS., on December 13, at 22 hours and 47 minutes after noon, or, according to the Ashmolean MS., at 22 hours and 48 minutes after noon. His earliest university was Copenhagen, after which he went to Leipzig to study law as his uncle demanded, but he was so fascinated by astronomy and astrology that he studied these two subjects secretly and cast many charts for his friends. At first he used the Ephemerides of Stadius. Tycho was not pleased with these and he then obtained the Prutenic Ephemerides. These latter were those which had been made by Erasmus Rheinhold (born 1451), one of the followers of Copernicus. They were named Prutenic because Rheinhold dedicated them to the Prussian Duke of Albrecht. Although Tycho was only sixteen, he soon found out that all of these computed planetary positions were wrong in the light of actual positions in the heavens, and it was this realization that made him determine that he would make his own observations, and build himself instruments with which to make them.

In 1572 a new star appeared in the heavens. Tycho wrote a book on the new star of 1572. The book took him several years to write and was not published in full until after his death, though many friends received manuscript copies of various sections, at various times. His "Conclusion" gives his astrological theories: that it would herald vast changes in both politics and in religion. Its influence, however, would not be felt for some nine years after the great conjunction of planets in Pisces, April, 1583, that is, not until about 1592, when the children born at the time when the star appeared would be grown up. Its influence, said Brahe, would last at least until 1632, when the Jupiter-Saturn Mutation would be established in the Fiery Trigon. It is in this book that he gave his famous prediction, which astrologers have maintained was fulfilled in the life of Gustavus Adolphus. Tycho said that a princely warrior would be born in the north, not before 1592, who would conquer Germany, and this prince would disappear in 1632. This came to pass when Gustavus Adolphus was born in 1594 and was killed in battle at Lutzen, November 16, 1632, at the age of thirty-eight. It seems that a thick November fog descended in the late afternoon upon the field of battle. Gustavus became separated from his main army and was killed. His body was found later and he was buried in Stockholm.

Brahe's king, Frederick II of Denmark, heard of his subject's fame and invited him to come back to Copenhagen and to lecture at the University there. Tycho accepted the invitation. At these lectures in Copenhagen he spoke on the new Copernican theory and revealed its principles but, as his biographer, J. L. E. Dreyer,[7] says, at the first lecture he "stated that a special use of astronomy is, that it enables us to draw conclusions from the movements in the celestial regions as to human fate. The remainder of the lecture was devoted to considerations on the importance and value of astrology."

Tycho did not believe that all people who claimed to be astrologers were good ones. He also refused to intervene in a dispute which came about when two different astrologers arrived at different conclusions in their readings of a certain nobleman's chart, beyond observing that when he looked at the horoscope each had drawn up, one was computed according to the Alphonsine Tables and one according to the Prutenic Tables, and that the former tables could be one month out when trying to compute a conjunction of Jupiter and Saturn, whereas the Prutenic ones could hardly fix the day. I think this statement of Brahe's is most important when considering some of the astrological judgments given out by astrologers before the Rudolphine Tables were computed by Kepler.

Frederick was so fascinated and delighted with his astrologer, and the fact that he was able to record more accurate star positions than anyone else in the world, that he made him his Court Astrologer, and declared that no building was too expensive or too magnificent to house this man's two sciences. He promised to build and equip a castle and an observatory on the Island of Hveen. The castle was called Uranienborg, in honor of the muse Urania, and the observatory which was sunk in the ground was called Stellberg, or the City of Stars. Tycho first visited the island on February 22, 1576, and he made an observation that the Moon was conjunct Mars that day, and that this would bring trouble in the long run, which it did. The foundations, however, were laid on August 8, 1576, when the Sun and Jupiter were rising, showing the fame that would come to the project. Not only students and helpers, such as Longomontanus, came to Uranienborg, but many nobles from other countries. There is a record of James VI, King of Scotland, visiting him, the same who later became James I of England. James married Anne of Denmark, the daughter of Frederick, whose chart Brahe had cast, as he had cast the charts of all the children of his king. An account of what he said in these horoscopes is given by Dreyer, who also informs us that the books in which the horoscopes were written were quarto size, of about 300 pages and bound in pale green velvet.

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[7] J. L. E. Dreyer, *Tycho Brahe* (Adam and Charles Black, 1890).

Unfortunately when Frederick II died in 1588, the new King Christian was only a youth, and not able to defend Tycho against the various nobles and against those who could not see the value of his work. Many bitter controversies arose, not only with the nobles but also with the tenants on Tycho's estate in Hveen, whom he had treated in a most dictatorial way. In the end, most of his revenues were cut off and he determined to leave Denmark. He decided to go to Bohemia and there until his death he was principal mathematician to the Emperor Rudolf II. Concerning his death on October 24, 1601, Kepler made notes that the Moon was opposition Saturn and square Mars. His beautiful castle of Uranienborg fell into disuse and finally into ruin. One year before Tycho died, John Kepler became his Assistant Mathematician, and it is claimed that only by acting on Tycho's advice and suggestions did Kepler discover the three great laws of planetary motion. Kepler may stand head and shoulders over Brahe today, but Kepler could not inspire any prince to build him a castle. In fact, he died almost penniless journeying to obtain the arrears of salary owed him by the Emperor Ferdinand, for Kepler was Principal Mathematician to three emperors,—Rudolf

II, to whom he dedicated his Rudolphine Tables, then to the Emperor Matthias and, finally, to Ferdinand. John Kepler (1571-1630) was born December 27, 1571 (O.S.) at 2:38 P.M. at Weil near Würtemberg. In 1594 he was made professor of mathematics at Gratz and in 1600 he joined Brahe at Prague. Brahe had predicted the coming of Gustavus Adolphus. Kepler was destined to read the horoscope of Albrecht von Wallenstein, the German general who was to fight Gustavus. The general was an astrological-astronomical student of one of Kepler's friends, Paulus Virdingius, and Paulus finally introduced him to another astrologer-astronomer, John Kepler. The horoscope and reading which Kepler made for Wallenstein was preserved at St. Petersburg, but whether it survived the revolution of 1917, or whether it has survived the current German attack on Leningrad, we do not know. After Kepler, Wallenstein employed Giambattista Zenno of Genoa as his astrologer.

The account of Kepler's reading of the famous horoscope, as referred to in *Your Destiny and the Stars* by Croysdale and Wilde, is somewhat mixed. The two authors are exponents of all the forty-four new aspects which Kepler, they say, invented when his predictions for Wallenstein failed. They state that Wallenstein was stricken by the plague at the age of twenty-two, and this embarrassed Kepler very much because he could find no Ptolemaic aspect to account for it. Then, again, they say that when Wallenstein was murdered in 1634, Kepler was again thrown into a state of the utmost perplexity, because he could not find a Ptolemaic aspect for this either. They go on to relate that Wallenstein had called him in and asked if he need fear assassination and that Kepler avoided giving him a direct answer. Other astrologers of the period did warn Wallenstein, but Kepler maintained that the chart did not show a violent death.

All this is most extraordinary in light of the fact that Kepler had been dead four years before Wallenstein was killed. Again, anyone who contends there was no Ptolemaic aspect to account for Wallenstein's death, cannot have read Ptolemy. In Book IV, Chapter 9, of his *Tetrabiblos,* Ptolemy says: "Mars causes deaths by constant fevers . . . sudden and spontaneous wound. . . ." Now, Wallenstein had Mars in Aries in his eighth House of Death, thus portending a very strong radical likelihood of a violent death, or one in which a steel instrument was used. Ptolemy also, in Book III, Chapter 12, states that prorogation or progression of the Midheaven has most potent and paramount influence. In Chapter 14, he states that this prorogation or progression of the Midheaven must be made by right ascension. Now, progressing Wallenstein's Midheaven by the rules of Ptolemy, with which Kepler must have been just as familiar as we are today, he would have arrived at Progressed Midheaven square the radical Mars posited at birth in the Eighth House of Wallenstein, in the actual year when Wallenstein was assassinated, and I think this was one of the clearest indications any astrologer could have had, of a violent death promised in the radical chart, and occurring the year when it was promised. It would seem then that Kepler, though one of our really great astronomers, was not, like Tycho Brahe, a great astrologer.

I think that one would come to the same conclusion in reading his almanac, *Concerning the More Certain Fundamentals of Astrology* (1602), which Mr. Paul G. Clancy was good enough to have translated and inserted in *American Astrology Magazine* during 1941, in order that astrologers and others might see for themselves what Kepler actually did say. My own impression when reading it was that Kepler was more interested in weather than in human beings. When Kepler once stated that "the stirring up of sublunary things by the conjunctions and aspects of the planets, instructed and compelled my unwilling belief," I maintain that it was a very unwilling belief, yet there is no doubt that he did believe in it when used with correct observations, and with discretion, for he used astrology in his second marriage. He had twelve ladies to choose from and made the choice by means of astrology.

William Lilly, in his *Prophetical Merlin* of 1644, pays tribute to the Rudolphine Tables which Kepler published. He says that he asked Nicholas Fiske to calculate for him the Great Mutation, that is, the Jupiter-Saturn Conjunction of 1603, and Fiske did this with the help of the Rudolphine Tables. Lilly then compared the result with the same Conjunction as observed by Sir Christopher Heydon in 1603 by means of instruments, and found each had the same result. I think this is interesting as showing that though previous tables were not correct, yet some astrologers were able to make their own correct observations, and therefore to obtain correct charts.

Francis Bacon (1561-1626) wrote among other things a book of *Essays,* one of which is called "Of Prophecy." In this he relates the story of the death of the French King, Henry II, who was accidentally killed in a tournament with Montmorency. It seems that Catherine de Medici had been forewarned of this by her astrologers and had sought to prevent Henry taking active part in the tournament, but he insisted on having his own way and was pierced through the brain by Montmorency's lance. Bacon hardly realized that his call for experimental science would make scientists of later days disbelieve in the principles of astrology. He himself believed in astrology. He says: "We will add one thing more, that we are certain the celestial bodies have other influence besides light and heat. Let this astrology be used with greater confidence in prediction, but more cautiously in election, and, in both cases, with due moderation."

Curiously enough, the pleas of the scientists and thinkers of the period of the Stuarts for more liberality of view from the religious bodies, in order that they might align the facts they obtained from experiment, coincided with the fiercest intolerance towards anything psychic or savoring of witchcraft. A papal bull against witchcraft had been issued in 1484 by Pope Innocent VIII but condemnation of witches was taken up by the Puritan bodies with equal fury. James I actually believed in witchcraft and wrote a book about it. The hunt for witches started in real earnest in England after his accession, and the Puritans who left for America carried this intolerance to these shores. Astrology was often stupidly confused with witchcraft. During James' I reign an anonymous book in defense of astrology was published, entitled *The Horoscopes of the Patriarchs,* which mentions many of the previous defenders of the art. The author answers many arguments current at the period charging astrology with being anti-religious. However, the new Copernican principles were also condemned as anti-religious, as we see in the case of Galileo. They were considered anti-religious because they violated many of the dicta of the mighty Aristotle, who was still the pet philosopher of many of the universities. I think Dreyer's story of Ramus,[8] a friend of Tycho Brahe, gives a very enlightening picture of the period. He says:

> At Augsburg, Tycho made the acquaintance of Pierre de la Ramée, or Petrus Ramus, Professor of Philosophy and Rhetoric at the Royal College at Paris, who had been obliged to leave France several times owing to his adherence to the Huguenot party, and the odium he had drawn on himself by his opposition to the then all-powerful Aristotelian philosophy. He wanted to discourage the exclusive study of this time-honored system of philosophy, now worn to a shadow, which had become a mere cloak for stagnation, bigotry and intolerance, and to introduce in its place the study of mathematics in the University of Paris. But his zeal only procured him much enmity and persecution; he had to apologize for his abuse of the Peripatetic philosophy before the Parliament of Paris, and by sentence of special royal commissioners appointed to investigate the matter, Aristotle was reinstated as the infallible guide to learning. Ramus had therefore for a while withdrawn from France, but, unluckily for himself, he returned in 1571, and perished the following year in the massacre of St. Bartholomew. This man (Ramus), who was naturally inclined to hail with pleasure a rising star in a science closely allied with his own, happened to be in Augsburg in 1570, and became acquainted with Tycho Brahe through Hieronymus Wolf, a man of great learning, especially in the classical languages, and himself drawn to Tycho by his love of astrology. Having been invited by Hainzel to inspect the great quadrant, Ramus expressed his admiration of this important undertaking, so successfully carried

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[8] J. L. E. Dreyer, *Tycho Brahe* (Adam and Charles Black, 1890).

out by a young man of only twenty three years of age, and begged him to publish a description of it. In his work Scholarum Mathematicarum Libri XXXI, published in Basle in 1569 (only a few months before his conversation with Tycho), Ramus had advocated the building up of a new astronomy solely by logic and mathematics, and entirely without any hypothesis, and had referred to the ancient Chaldeans and Egyptians as having had a science of this kind, which had gradually by Eudoxus and that terrible Aristotle been made absurd through the introduction of solid spheres and endless systems of epicycles. Ramus explained his views to Tycho (who has left us an account of the conversation); but he answered that astronomy without an hypothesis was an impossibility, for though the science must depend on numerical data and measures, the apparent motion of the stars could only be represented by circles and other figures. But though Ramus could not bring over the young astronomer to his views, they could cordially agree in the desire of seeing the science of astronomy renovated by new and accurate observations, before a true explanation of the celestial motions was attempted; and it can hardly be doubted that the conversation of this rational clear thinker (so different from a Leovitius, with his brain crammed full of astrology and other hazy fanciful ideas) took root in the thoughtful mind of the young astronomer, and bore fruit in after years in that reformation of his science for which Ramus had hoped.

Galileo (1564-1642) at first studied medicine at Pisa. He then became mathematician and astrologer to the Dukes of Medici, making horoscopes for both Ferdinand I and Ferdinand II. In 1632 he published his *Dialogue on the Ptolemaic and Copernican Systems*. Perhaps if Galileo had not presented his material in dialogue fashion, such as caused irritation, the book might not have created such a furore as it did, and landed him in the hand of the Inquisition. But the defenders of the Ptolemaic System were still in power, though Copernicus had been dead a hundred years or more. Galileo's *Dialogue* was peculiarly exasperating to the church. It is somewhat difficult for people living today to realize that the Ptolemaic scheme of the universe had become almost a religious conviction, and was considered provable by the first chapter of Genesis. The Copernican system upset many of these views, with the result that it was damned as heretical, just as the activities of Pasteur or Darwin or various scientists of the last century have been considered irreligious by almost every religious sect. People are slow to grasp the fact that upsetting deluded ideas as to how the universe is made or composed or moves, does not upset religion. In any case, Galileo's Copernican beliefs did not prevent him from using the geocentric positions when he made horoscopes. It is said that Milton visited him and looked through his telescope. Milton later writes of the Milky Way being "powdered with stars," but although this was generally acclaimed at the time as being something entirely new, it was something that was known to Manilius in the days of the Caesars.

Contemporary with Galileo was a curious alchemist-astrologer, Robert Fludd (1574-1637) born in Kent, England, and educated at Oxford. He spent five years on the Continent, chiefly in reading and following up the works of Paracelsus, and occasionally arguing with Kepler and his friends, for Fludd also was employed by the Emperor. Out of the works of Paracelsus and the Kabbalists, Fludd evolved his own philosophical system. In 1616 he was writing on the Fraternity of the Rose Cross. The interest in Rosicrucianism spread to England, partly through Fludd's influence. That it had become quite important by the time of Charles II, we know from Samuel Butler's *Hudibras,* where we meet the Rosicrucians as well as the astrologers. According to Butler, the Rosicrucians had no need for astrology, for they got all their knowledge of the future "out o' the air." Just as Butler laughed at astrologers, so he laughed at Rosicrucians. Elias Ashmole met Fludd and may have derived some of his alchemical tracts and knowledge from him. Ashmole is credited with founding one of the first Rose Cross groups in London, in 1646.

Jacob Boehme (1575-1624) gives us an insight into a metaphysical concept of astrology, in his Doctrine of Signatures.[9] He describes it thus:

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[9] Jacob Boehme, *The Signature of All Things* (Everyman's Library).

> The outward visible world with all its being is a signature or figure of the inner spiritual world; whatever *is* eternally, or however its operation is, so likewise it has its character externally.

This is the foundation of astrology, since the outward physical appearance is the result of an inner will, whose operation is known or understood, because it is of like signature, or nature, with the figure of the heavens at the time of birth. The heavens are the macrocosm which reveals the microcosm. This was the foundation of all herbal astrology, where *the appearance denoted the function*. For example, in an old herb book I read that "citron apple, skipenard, mint, parseley, which bear in their leaves a heart formation, are congenial to the heart. They are therefore placed under Sol, who is the ruler of Leo, the sign of the heart. Herbs that simulate the shape of the lungs, as sage, lungwort, etc., are good for pulmonary complaints. They are under Mercury, since Mercury rules Gemini, the sign of the lungs."

In his *Signatura Rerum,* Boehme is not writing an astrological text book, but his whole foundation is on astrological principles, so much so that he is hardly intelligible to one who does not understand astrological principles and philosophy, and also some alchemy. In Book 4 of this book he tells us that "the mother of all things" introduced itself into seven forms when the universe was created. Although Boehme does not always mention the planetary assignments in his various paragraphs on this, yet they are easily recognizable by an astrologer. Boehme's formation of the world is planetary in concept and the planets are mentioned in their sequence from Saturn to the Moon, with the Sun in the center:

Paragraph 5. The first form is "astringent." This form would be of the nature of Saturn.

Paragraph 6. The second form is the "compunction." This form would be of the nature of Jupiter.

Paragraph 7. The third form is of the nature of "anguish." This form would be of the nature of Mars.

Paragraph 8. The fourth form is the "fire itself." This form would be of the nature of the Sun.

Paragraph 9. The fifth form is the "love desire." This form would be of the nature of Venus.

Paragraph 11. The sixth form is the "multiplication of the essence." This form would be of the nature of Mercury.

Paragraph 13. The seventh form is the "body or food of all the other forms." This form would be of the nature of the Moon.

I do not see how any modern astrologer can quarrel with these assignments of the essential qualities of the planets.

Queen Elizabeth had her horoscope calculated by Lord Burghley before she was Queen or he was Lord, and he is said to have promised her that she would come to the throne in spite of all her enemies. She held the throne of England from 1558-1603, during one of the stormiest periods of English history, with invasion not only threatening the country but actually attempted. Who could wish to have had the task of guaranteeing her a long and successful reign and "confusion to her enemies"? Yet Dr. John Dee (1527-1608) promised this to the twenty-five-year-old Elizabeth when he was asked by the English Parliament to set a "suitable time" for her coronation. He chose the date January 14, 1559. According to the custom of the day, it was the duty of the Court Intelligencer, as the governmental astrologer was called, to set suitable times for all public events. Doctor John Dee was educated at Cambridge University. We find him at the court of Edward VI, and it is probable that he met Jerome Cardan there. In any case, he was given the position of Court Intelligencer in the last years of Edward's life, and probably, like Cardan, he found it wise not to predict too accurately about the length of life of the young king. Dee set the date and time for Elizabeth's coronation so well that she reigned for forty-five years in spite of enemies, armadas and plots. History does not record that the learned doctor was any more nervous about the final fate of the Armada than was his royal mistress, who, when she heard that the Spanish navy was in sight, immediately rode to Tilbury on horseback and there delivered a magnificent speech of encouragement and confidence to the fleet, army and citizens. Whether Doctor Dee astrologically foresaw its coming is difficult to know. However, he does tell us himself that about four years before Elizabeth came to the throne he had a terrible and distressing vision of great ships coming "and the Angel Uriel declared to him that they were ships provided by foreign powers against the welfare of England." It is possible that he still remembered this vision when he set the coronation date, and so timed it that "the house of foreign affairs" should be tenanted and aspected in such a way that it would show the ability to overcome enemies.

Whether Dr. Dee taught Elizabeth any astrology, I do not know, but he designed a very beautiful astrolabe for her. Humphrey Cole received the command to make it.

Because Dee had various mirrors, one made of polished coal and one of crystal, and stated that he was able to "see" people and events, many people presume that the doctor was merely a psychic and not a real mathematician and astrologer. Sir Elias Ashmole in his *Theatrum Chemicum Britannicum* refutes this most completely, in the notes at the end of his book. I give various quotations: "Doctor Dee,—he chiefly bent his Studies to the Mathematics, in all parts of which he was an absolute and perfect Master. Witness his Mathematical Preface to *Euclid's Elements,* wherein are enumerated many Arts wholly invented by him (by Name, Definition, Propriety and Use), more than either the Grecian or Roman mathematicians have left to our knowledge . . . with several Pieces of Navigation, Perspective, and other rare Mathematical works of his in Manuscript."

Ashmole also notes that Dee wrote *One Hundred and Twenty Astrological Aphorisms* and that he wrote on the Kabbala. He says that when Dee went overseas the mob seized no less than four thousand of his books and seven hundred valuable manuscripts. Upon which, Ashmole comments that books so valuable as these should not be kept in private homes. In fact, it may have been just this that made Ashmole decide that museums and libraries must be built. (Later, Dee collected more books and Ashmole bought some of these. See Appendix IX). Ashmole then goes on to tell of Dee meeting Sir Edward Kelly, another alchemist of the time, and how the two went to Glastonbury Abbey and there found a few drops of the Elixir from which Kelly was able to make gold. The Elixir was so potent that in May, 1583, they were able to go to Europe and stay there with their wives and families for six years two months and two days. I think the implication here is that they made enough gold to finance the trip. At the end of six years Queen Elizabeth asked Dee to return. He cannot have been too short of money on this return journey, for he was able to make a present of twelve Hungarian horses to the Landgrave of Hesse before he left the Continent. He left Kelly in Prague "and so escaped that straight confinement which Sir Edward Kelly suffered at Prague by command of Rudolf II, Emperor of Germany." Kelly, it seems, either could not, or would not, give the Emperor the secret of making gold. Ashmole includes in his book a horoscope of Kelly, "graved from the original Calculation of Doctor Dee."

Elizabeth seems to have loaded the doctor with kindness on his return. She even requested him to read aloud to her some of the books he had written. Many a time she came galloping on horseback from London to his house in Richmond and would look into his magic mirrors. Apparently, she was able to "see." "The Queen used to call at his house to visit him and shewed herself very courteous to him, upon all Occasions. Against Christmas 1590 she sent him 200 Angels [gold coins] wherewith to keep Christmas . . . She likewise sent him to do what he would in Alchemie and Philosophie [Astrology] and none should control or molest him." The Queen asked him what office he would like, but his reputation as a magician made it difficult for her to grant the various offices he wished. However, in the end he was appointed to the Chancellorship of St. Paul's Cathedral, on May 27, 1595. Later, he was made Principal of Manchester University.

Dee still corresponded with Kelly at Prague and learned that Kelly had been imprisoned. It is said that Kelly escaped by a window, but that, being a heavy man, he fell and broke his leg, dying from the effects. Whether this was so or not, Dee received the news and wrote in his *Diary* for November 25, "News that Sir Edward Kelly was slaine."

There was another man of Welsh descent like Dr. Dee for whom Dr. Dee seems to have had a very great admiration. This was Dr. Robert Recorde (1500-1558), who taught at Oxford and who was renowned for mathematics, astrology, anatomy and music. He was the private physician of Edward VI and of Queen Mary. Dee bought out a whole edition of his *Arithmetic,* from which we may presume that he made it a major textbook in all his classes. Evidently, Dee's own teaching of mathematics was no dull matter. When he taught at Louvain it is said that no classroom was large enough for him and that his students stood and crowded on window ledges and outside the open windows by the hundred. Like Recorde, Dee was one of the first to adopt the Copernican views of the universe. That both used geocentric longitude in setting up their astrological charts is no more argument against their having believed in a heliocentric system of computation than it is today when astrologers still use geometric longitude and yet hold Copernican views. Dee was also a profound exponent of the Pythagorean system of numbers.

He used Mercator's globes long before other mathematical teachers thought of so doing, and was a very able astronomer making thousands of star observations. Evidently he had a very practical side to his nature, for he used these observations to further the science of navigation. All the great sailors of the period flocked to Dee's door—Hawkins, Frobisher and Davis. These great sailor-explorers did not visit him from curiosity but because he had scientific data to offer. He wrote a book on the tides entitled *On the Cause of Ebbs and Floods*. As a matter of fact, Dee was one of the first to suggest a Royal Navy for England. He asked Elizabeth to finance at least three ships which should protect the coasts and "Survey" the coasts too in their spare time. Elizabeth, however, was running the whole country, army, civil service and everything else, on an income that never exceeded three million pounds, and Parliament haggled with her over every pound of this, so that the idea of a Royal Navy did not materialize during her reign. However, weighing the explorations of the time, she and Burghley invited Dee to give his opinion on English rights to Greenland, Estoliland (Newfoundland) and Friseland, and the doctor replied that she had all rights.

The leaders of the army, like Leicester, came to visit him. So also did the poet-soldier Sir Philip Sidney. Both these believed in astrology. Sidney speaks of the "dusky souls" of those who "scorn astrology." Dee was also called in to give advice on the Calendar. After much calculation he delivered his opinion that the proposed Gregorian changes were not entirely correct and he considered that rather more than ten days was necessary to bring the calendar into shape.

Dee's original *Diary* [10] was discovered in the Ashmolean Library, in the early nineteenth century, by W. H. Black, and it has been reprinted. Black found it written on various old calendars in a very rough and illegible way. Dee seems to have used it, partly as a record of data of astrological clients. He has been so much maligned and slandered by historians who have wished to preach a moral sermon against anything occult, that it is only since this diary was printed—and from Ashmole's book—that people can make a just estimate of this very learned man. He lived in an age when people were so frightened of the devil and of the unseen world, that they were afraid of a man, who was not only not afraid, but who wished to investigate the unseen world. Modern science has been inclined to go to the other extreme and to think that there is nothing to investigate, and that therefore Dee was a lunatic for thinking there could be.

Valentine Naibod, who flourished at the close of the century, is most important today. He was a good astrologer-astronomer who wrote a Commentary on the works of Alchabitius. He is chiefly remembered for calculating the mean annual motion of the Sun. This has been of great value to astrologers in the progression of horoscopes, particularly in Radix-directions, a method put forward during the last half century by Sepharial. Naibod wrote *De Coelo et Terra* in 1573.

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[10] *Autobiographical Tracts of John Dee* (The Chetham Tract Society).

The Rev. Robert Burton (1577–1640) took up astrology in order to prove to his parishioners wherein it was false and futile. He ended by becoming a very fine astrologer. Ashmole speaks of meeting him. He was a clergyman of the Episcopal Church in England, having been born in Leicestershire. He wrote *The Anatomy of Melancholy,* in order to avoid being melancholy. The book itself shows a wide acquaintance with most of the early writers on medicine, including many of the Arabian ones. He predicted the date of his death several years before it took place.

James Usher (1581-1656), Archbishop of Armagh, is also said to have been much interested in astrology. He is generally known for the scheme of biblical chronology which he introduced and which was universally accepted at that time, but which has caused endless disputes in more modern days. Suffice it to say that the date of 4004 B.C. for Creation, was not a haphazard date, but one related to astronomical cycles which were part of the sacred knowledge of the ancients.

The works of Morin de Villefranche (Johannes Baptistus Morinus, 1583-1656), are still considered by the modern French school of astrologers as one of the priceless heritages of history. He was born February 23, 1583 at Beaujolais. He studied philosophy at Aix and medicine at Avignon, after which he lived in Paris. Here he met an astrologer who was not a very good mathematician and not very precise, but Morin studied with him for want of a better teacher, until he found out what should be done. He soon became a much better astrologer than his teacher, and because he had had such a hard time learning, he devoted almost the rest of his life to putting the subject into scientific order. He became the greatest astrologer in France of his day and numbered among his clients Richelieu, Mazarin, Louis XIII, Tronsen and Marie de Medici. In such time as he could spare from clients he worked on a voluminous textbook which he entitled *Astrologia Gallica.* It runs into 26 books, and took him thirty years to complete. It was first written in Latin. Later, it was translated into French. I do not know of any complete English translation. Louis XIII is said to have thought so highly of him that as the period arrived when his son and heir, Louis XIV, was about to be born, he gave orders that Morin was to be placed behind a curtain in order that he might hear the first cry of the child and so make an exact chart, this because astrologers believe that the time of the first breath, or cry, is the real time for which a chart should be set.

About the same time lived Henricus A. Lindhout. He wrote *On the Great Conjunctions of Jupiter and Saturn.* In 1597 he wrote his *Introductio in Physicam Judiciariam,* which is a justification of the art of astrology against the charges of various people who had calumniated it. Then, in 1608, he wrote *Speculum Astrologiae,* on the scientific basis of the genethliacal art.

At the close of the sixteenth century the works of Count Henricus Ranzovius (sometimes called Ran Jovius) were very popular. He wrote on herbal medicine: *De Virtutibus Herbarum.* He also wrote a highly technical book explaining the sources of all types of calendars. It was called *Diarum sive Calendarium Romanum, Oeconomicum, Ecclesiasticum et Astronomicum* (1593). He was a well-known astrologer, for in 1602 he brought out a book on genethliacal astrology, entitled: *Tractatus Astrologicus de Genethliacorum.* Apparently he continued writing on various phases of astrology until at least 1615, when he wrote *On Climacteric Years.*

Since changes in the calendar have caused more bafflement to astrologers than to almost any other class of people, I will close this chapter with some mention of the very radical calendar changes of the sixteenth century. I have had numerous letters at various times from people, saying that I had mentioned a person as being born under, for example Pisces, and they had found, when reading a biography, that he must have been born under Aquarius. In nearly every case the discrepancy has been because of the conflict between Old Style and New Style dates, though most encyclopaedias give both dates. Also, speaking generally, we now say the month March is given to Pisces, since the change to Aries comes about the 21st day of the month, but in old poems written before the change was effected, we find that March was assigned to Aries, and the other months in corresponding fashion —as we see in the *Faerie Queene* of Edmund Spenser (1552-1599), Book 8, Canto 7, which every astrologer should read.

The sixteenth century is memorable for the change by various nations from the Julian to the Gregorian calendar. The error in the Julian method of calculation amounted to one day in 128 years, so that by 1528 there was an error of about ten days, and Pope Gregory VIII decided to have this corrected. He therefore decreed that October 5, 1582 (Old Style) should be called October 15 (New Style). That is, from 45 B.C. to the end of October 4, 1582, would be old style or Julian style, and all after that would be new style or Gregorian style. Now, all this might have been a good idea if the nations of Europe had agreed. But they didn't, with the result that we have had centuries of confusion about dates, ever since. Henry Fitch, in *The Perfect Calendar,*[11] tells us when the various nations made the change:

> The New Style was adopted by Italy, France, Spain and Portugal in 1582; by Prussia, the German Roman Catholic States, Switzerland, Holland and Flanders, on January 1, 1583, Poland 1586, Hungary 1587, the German and Netherland Protestant States and Denmark in 1700, Sweden between 1700–1740, and the British Dominions, that included the North American Colonies at the time, in 1752. . . . By the terms of the Act of Parliament what would have been September 3 was to be known as September 14. England dropped 11 days instead of 10, as Gregory had done in 1582, because in the 170 years intervening, the error of the Old Style had amounted to one full day or more.

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[11] *The Perfect Calendar* (Funk & Wagnalls, 1928).

The New Style was adopted by Japan in 1872, China 1912, Bulgaria 1915, Turkey and Soviet Russia in 1917, Jugo-Slavia and Roumania in 1919, and by Greece February 1923.

However, we might add that Scotland adopted the change in 1600, and when James I came to the throne of England, some persons tried to please him by using "Scotch" dates. In the early seventeenth century, we find another aggravation—some years are dated with two numbers. For example, the date when Charles I was executed was January 30, 1649, in our present way of assigning it, but Lilly on his horoscope for this date writes it 1648-9.

Chapter 20

ASTROLOGY IN STUART TIMES

There are in Astrologie (I confess) shallow Brooks, through which young Tyroes may wade; but withal there are deep Fords, over which the Giants themselves must swim.

Elias Ashmole

Strange meetings in Gunpowder Alley, also "mathematical feasts" at the White Hart in the Old Bailey, at Painters' Hall and at the Three Cranes—these, in the times of the Stuarts, intrigue us very much—and the guests present were of all ages, old and young—Arise Evans, a Welsh prophet; William Lilly, an astrologer who predicted the Plague and the Fire in London, and who once sought by night for gold in Westminster Abbey; Lilly's adopted son Henry Coley, a fine mathematician; John Booker whose business it was to censor Mathematical (astrological) publications; Sir Elias Ashmole, lawyer, astrologer and alchemist; Sir George Wharton, who had initiated Sir Elias into the two latter studies; John Gadbury and his student John Partridge, both astrologers of note; Vincent Wing, astrologer and astronomer; John Mallet, Geoffrey Le Neve, James Blackwell, John Sabye and John Heydon, author of *The Temple of Wisdom*. Even Sir Kenelm Digby may have been present at times, also George Parker who wrote Ephemerides, Culpepper the herbalist, Dr. William Salmon, Dr. William Saunders, Sir Richard Napier and his father Dr. Napier. And in the latter part of the century when the meetings still went on who knows but what Sir Isaac Newton and John Flamsteed may not have been present, for both were astrologically minded? And as an onlooker, Pepys of the immortal diary fame, for John Booker brought him on at least one occasion. And let us not forget that Sir Edward Dering and the Towne Clerke of London felt honored to receive the office of stewards of these "astrological feasts." No wonder, with the Towne Clerke present, the menu included even venison. They probably started with turtle soup. What a company! All interested to know what the other thought and yet all but Elias Ashmole, ready to fight at the drop of a hat! Some were Royalists and some were for the Commonwealth—each quite sure that his particular astrological, kabbalistic or psychic method of divination was the only one that gave correct results. How did Ashmole stay friends with them all? And how did he ever come to meet them?

Sir Christopher Heydon could not have been present at these meetings, for he died in 1623, ten years before Arise Evans came to London, but the group often spoke of him, for was not Sir Christopher knighted for special bravery at the siege of Cadiz when Essex had sacked it, and had he not proved himself just as heroic a champion for astrology when it was under fire from various attacks? Ashmole sang out his praises of Heydon, saying of the book, *The Defence of Astrology,* which Heydon wrote, "It stands firm and unconfuted," and Lilly remarked dryly, "One Chamber wrote against us; but he had such a Lesson returned by the Learned Sir Christopher Heydon, in answer to his Folly that the very grief killed the old worme-eaten Cannon of Windsor." It was an age when everyone was fighting, scrapping, quarrelling,—religious fights, literary fights, political fights, scientific fights, astronomical fights, and astrological fights. The literature of the seventeenth century abounds in details of what one person called another, and there was no mincing of names and phrases. "Argumentum ad hominem" was carried to a fine art. If at the close of the century a satirist could say, "And men fell out they knew not why," this was merely a helpful way of making men smile at the serious and positive convictions which had made them take out their battle axes against their opponents in previous years.

In 1601 Canon John Chamber wrote a *Treatise Against Judicial Astrology,* and Heydon replied with *The Defence of Astrology.* The argument was not a Copernican versus a Ptolemaic argument; for the good Canon was the lecturer at Oxford on the Ptolemaic

System. After Heydon's book came out, Bishop George Carleton, one of Chamber's friends, wrote a reply to Heydon entitled *The Madness of Astrology*. But this was not enough for the Canon. He still smarted under Heydon's cannonade, which carried the attack right into the heart of the enemy's territory. Chamber sat down and wrote all that was smouldering in his heart, under the title of *The Confutation of Astrology; Demonology in the Devil's Den*. This he dedicated to James I, who believed very much in demonology. However, Chamber's book was never printed, only passed around in manuscript.

The year 1603 was one that was very important politically, because it heralded in James Stuart who united the crowns of Scotland and England, but it was also important astrologically, because Saturn and Jupiter, not only made a conjunction, as they do every twenty years, but they made their conjunction in a Fire sign, as they had not done for nine hundred years and more. The year 1603 started a series of Jupiter-Saturn conjunctions in the fiery trigon, that is, in the signs of Aries, Leo and Sagittarius, and these would last until the early nineteenth century, when the conjunctions would change into the Earth signs Capricorn, Virgo and Taurus. As so much prediction on mundane events,—changes in government, religion and politics—is deduced from these major changes of element of the Jupiter-Saturn conjunctions every 240 years or so, all the well known astrologers of the period studied the conjunction carefully, and Heydon wrote his *Judgment of the Saturn-Jupiter Conjunction of 1603 in The Present Fiery Trigon*. This book seems to have been a stimulus to all other astrologers to research on the matter. Later, William Lilly gave much thought to it. In fact, in his *Prophetical Merlin* for 1644 he, gives charts of the conjunctions occurring in 1425, 1444, 1464, 1484, 1504, 1524, 1544, 1563, 1584, 1603, 1623, 1643—that is, no less than 12 charts—a matter of much labor and research. In his comments he quotes Messahala, John Hispalensis, Bonatus and John Ganivelus. He notes that the "Water trigon" recurred in 1643, so that the "Fire trigon" was not established until 1663.

Let us next turn to Sir George Wharton, who taught Elias Ashmole both alchemy and astrology. Wharton (1617–1681) hailed from the North of England, from Westmoreland. He came down to Oxford to study astronomy and mathematics. After that, he appears to have returned home and published under the pseudonym of Naworth, various almanacs, but when the Civil War broke out, he joined the Royalist cause. Charles I had his headquarters at Oxford which was almost entirely Royalist, and Wharton came back to his old university town, becoming a captain in the Ordnance. It was on this visit that he met Ashmole and taught him all the various occult work he knew. Ashmole writes of this in his *Diary:*[1]

1645. March 22: I first became acquainted with Captain Wharton, between 8 and 9 in the morning. April 17: Captain Wharton moved me to be one of the four guards of the ordnance in the garrison of Oxford. June 11: I entered my command as Comptroller of the Ordnance.

Later, Wharton appears to have followed Ashmole to London and both met all the important astrologers in the city. The friendship evidently lasted, for we have the following entries:[2]

1647. Feb. 14: The Mathematical Feast was at the White Hart in the Old Bailey, where I dined. 1647. August 14: Captain Wharton had the plague. 1648. March 12: Captain Wharton taken in his bed and carried to Newgate, 6 p.m. 1648. Aug. 27: Captain Wharton made an escape out of Newgate.

Wharton was always in hot water. He hated the Parliamentarian group. He did not like the astrologers and they did not like him. He quarrelled violently with them all and attacked them in his calendars. They in turn defended themselves. Lilly seized on the name Naworth, and referred to him as the man "of no worth." As if the astrologers had not enough troubles of their own, especially with a Civil War in progress, the Irish question was injected. Booker provoked this by an article on the conjunction of Mars and Saturn in Taurus, which he said would bring trouble to Ireland. Wharton refuted these arguments in a pamphlet entitled: *"Bellum Hybernicale,* or Ireland's War astrologically Demonstrated from the late celestial congress of the two malevolent planets Saturn and Mars in Taurus, the Ascendant for that country. . . . The ignorance, malice, mistakes, errors, insolences, and impertinences, of John Booker, in his astrological observations upon the said conjunction, in a late pamphlet of his styled A Bloody Irish Almanack, etc., discovered, corrected, refuted, and retorted: and the author further vindicated, from his and Master Lilly's former frivolous, false and malicious aspersions, throughout the whole discourse."

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[1] Ashmole's *Diary* (reprint, Oxford University Press).
[2] *Ibid.*

Lilly made the reply to this, saying: "You are yet in your ABC; when you have learned your Accidence you may be able to prate, but not correct Master Booker, nor myself. The Pamphlet you mention, I wrote; nor am ashamed of it."

It certainly did not look as if a feud such as this could ever be healed. Then Wharton's Royalist sympathies got the better of him and he made bitter attacks on Cromwell, so that on November 21, 1649 he was taken to prison and there he stayed until the following June, when it became evident that he would probably be hanged. It was in this great crisis that Lilly showed one of his best sides. He forgot the feud and went to his rescue.

Ashmole's *Diary,*[3] on the subject of Wharton about to be hanged, is very illuminating:

1649. Nov. 21: Captain Wharton re-taken and carried to prison. 1650. Aug. 8: I being at the Astrologers' Feast 2 p.m. was chosen Steward for the following year. Captain Wharton, having been carried to the Gate House, the Nov. 21 last; the next day after, I went to Mr. Lilly, and acquainted him therewith, who professed himself very sorry, because he knew Bradshaw intended to hang him; and most generously

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[3] *Ibid.*

> (forgetting the quarrel that had been between the Captain and him) promised me to use his interest with Mr. Bulstrode Whitlock (his patron) to obtain his release. I thought it not prudent then to have my name (as the times stood) appear in print, as the instrument that wrought Mr. Lilly to do this kindness for him; and therefore in Captain Wharton's Epistle to the Reader before his Almanack in 1651, when his acknowledgements were made, of Mr. Lilly's assistance in this strait, all acknowledgements to me are omitted, tho in truth I was the only person that moved and induced Mr. Lilly to perfect his enlargement. Having at all times, since my return to London, anno 1646, befriended Captain Wharton, not only in discovering all designs that I heard laid against him, either at Mr. Lilly's or elsewhere, but also affording him my purse freely and liberally, towards his support in many necessitous occasions . . . he styled me in his Almanack for the year 1653, his Oaken Friend.

There are later entries in the *Diary,*[4] concerning Wharton:

> 1655. Jan. 16: Captain Wharton taken prisoner. Aug. 7: Captain Wharton came home on parole. Aug. 29: This day the Astrologers' Feast was held.

Evidently Captain Wharton was present.

After the Restoration, matters were easier for him. He still brought out his calendars but changed the title to *Calendarium Carolinum,* or Calendar of Charles. His reward for his Royalist sympathies came in 1677 when he was made a baronet by Charles II. After Wharton's death on August 12, 1681—two months after Lilly's death—John Gadbury collected all he could of Wharton's works and published the collection in 1683.

Who was this Arise Evans who held his meetings in Gunpowder Alley? His real Christian name was Rhys, which by any Celt is pronounced Reece, but the Saxon, seeing it spelled the way it is, is inclined to call it Rice or Rize. Hence, when this fiery little Welshman came to London in 1633 and began to startle everyone by his visions and prophecies, in which he said that people must awaken to the fact that the country was heading straight into civil war, popular wit and fancy amused itself by going one step further and calling him "Arise"! His visions, all through the Commonwealth, were that the country would not prosper until the royal line was restored. Many a time he boldly told the Lord Protector Cromwell that Charles II must be brought back, but Cromwell, though he did not punish him, refused to entertain his advice or to believe his visions. Almost everyone laughed at Arise, but in the long run he was right. Everyone laughed, but everyone went to see and hear him as a matter of curiosity,—even the sage diarists Pepys and Evelyn laughed, but they wanted to know what he said. Ashmole makes this entry in his *Diary,*[5] under the date of April 20, 1653:

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[4] *Ibid.*

> This morning I first became acquainted with Arise Evans, a Welsh prophet; and speaking of the Parliament, I asked him when it would end? He answered the time was short, and it was even at the door; this very morning at eleven o'clock, the Mace was taken from the Speaker, and the Parliament dissolved; and I conjecture it was much about the time that Arise Evans and I had the discourse.

Arise was Lilly's first teacher of astrology. In his Autobiography Lilly tells us that on a Sunday in 1632 while talking with the clerk of a justice of the peace, the latter spoke of a great scholar who could make almanacs—a man named Evans, in Gunpowder Alley. Lilly went there and for six weeks or so had lessons from him, but found him very chaotic and a very poor mathematician, hence he ceased taking lessons and decided to buy books and study by himself. All the books Evans had were Haly's *De Judiciis Astrorum* and Orriganus' *Ephemerides.* His teaching was such that Lilly comments, "I thought I was in a wilderness." This poor teaching that Arise gave him was one of the major reasons why Lilly later decided to write his own textbooks on astrology in the English language, in order that succeeding students might not have such a difficult approach as he and various others had when a poor teacher and Latin textbooks only were available.

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[5] *Ibid.*

It seems that on one occasion Sir Kenelm Digby and Lord Bothwell went to Gunpowder Alley and asked Evans to show them a spirit. The three men then held a séance. Lilly reports that in some mysterious way Evans was transported out of the circle and was dropped down in Battersea. As there was no bridge to Battersea in those days but only a ferry, this would have been an extraordinary feat. However, the two visitors could not find him and departed home. The following day when they came back to see if Arise had returned he told them that he woke up from his trance in Battersea. He even told them all the details of his most difficult return, but stuck to his story that he knew nothing from the time the spirit picked him up in Gunpowder Alley until it left him in Battersea, alone and wondering where he was.

Sir Kenelm Digby was educated to enter the diplomatic service. After leaving Oxford he travelled on the Continent and while in France he met the then Prince of Wales, who afterwards became Charles I. He made a horoscope for Charles and the two became firm friends. When the Civil War broke out, Digby fought on the king's side but was captured in battle. He then spent five years in prison from 1638 to 1643, until he was fortunate enough to escape to France, where the French king gave him various minor diplomatic posts, for Digby was entirely without money, his English estates having been forfeited. When Cromwell came to power, Digby returned to England and was pardoned. Cromwell appears to have taken a great liking to Digby, whose religious views had a very mystical trend. They conferred a great deal and henceforth Cromwell did everything to help him. Digby's great interest in mysticism, alchemy and astrology did not prevent him from being one of the foremost scientists of the day. We find he was one of the original founders of the Royal Society, which is devoted to science. He presented no less than 236 volumes to the Bodleian Library. He is said to have married very happily because he compared his wife's chart with that of his own. The harmony between the charts was expressed in real life. Digby died in 1665.

John Evelyn in his *Diary,* under date July 9, 1665, makes this statement, "I supped this night at Lambeth, at my old friend's house, Mr. Elias Ashmole's, with my Lady Clarendon, the Bishop of St. Asaph and Dr. Tenison, where we were treated at a great feast." And again under entry for July 23, 1678: " I went to see Mr. Ashmole's Library and Curiosities at Lambeth. He has divers MSS but most of them astrological, to which study he is addicted, though I believe not learned, but very industrious, as his History of the Order of the Garter proves."

I am afraid Mr. Evelyn was mistaken about Ashmole's learning in astrology. Evidently the entire lack of sophisticated bombast in a real student who could rectify his chart to split seconds, and whose interest was part of life itself, misled Evelyn. Ashmole, in his *Theatrum Chemicum,* makes this statement:

> Astrologie is a profound science: The depth this Art lies obscured in, is not to be reached by every vulgar Plummet that attempts to sound it. Never was any age so pestered with a multitude of Pretenders, who would be accounted (and stick not to style themselves) Masters, yet are not worthy to wear the badge of Illustrious Urania. And (Oh! to be lamented) the swarm is likely to increase, until through their Ignorance they become the ridiculous object of the enemies of Astrologie; (would that were all) and eclipse the glory of that Light, which if judiciously dispensed to the World would cause admiration, but unskilfully exposed, become the scorn and contempt of the Vulgar. . . . There are in Astrologie (I confess) shallow Brooks, through which young Tyroes may wade; but withal there are deep Fords, over which the Giants themselves must swim.

Ashmole was not merely good at genethliacal astrology but good at horary astrology and the astrology of elections. In his notes to his *Theatrum Chemicum* he speaks of the necessity of setting times for certain matters—elections in short. Then he goes on to affirm that the birthchart must always take precedence of election charts, in other words, the birthchart is the prime factor. Let me quote his actual words:

> Nativities are the radices of Elections and therefore we ought chiefly to look back on them as the principal Root and Foundation of all Operations; and next to them the quality of the Thing we intend to fit must be respected.

It is this latter phrase that most students fail to respect. They will find a day with beautiful Venus aspects, for a matter that has absolutely nothing whatsoever to do with Venus, and then wonder why or where they go wrong in their judgment, or they will choose a day when Mars is rampant, to try to make a peaceful settlement, saying that some other planets are well aspected to one another. Ashmole is distinctly right when he infers that there must be a fitness of the heavenly scheme to the particular or specific matter that is planned. The astrologer's problem is that sometimes such a heavenly scheme will not happen within the period that a person wants to do something, and most people do not understand that an astrologer cannot put the planets where he might like them to be.

Elias Ashmole was born at Lichfield, the son of a saddler, who preferred being a soldier with Essex to making saddles. His birthday was May 23, 1617 and his mother said it occurred about half past three in the morning. Ashmole says, "When I rectified my nativity, in 1647, I found it to be 3 hours and 25 minutes and 49 seconds A.M., with the quarter of Gemini rising." He seems to have been quite musical, for he played the organ in Lichfield Cathedral, though he trained to be a lawyer, and at sixteen years was sent to live with a relative, Baron Paget, in London, until he was admitted to the bar. At the age of twenty-eight he went to Oxford. There he met Wharton and entered the king's army. When he returned to London in 1646—like every student of astrology, he was most anxious to meet and confer with other astrologers. The opportunity came when Sir Jonas Moore, who was tutor to the then Duke of York and later Surveyor of the Ordnance, introduced him to William Lilly, and Lilly in turn introduced Moore to Booker. Soon he had met nearly all the astrologers, for in just a few months after meeting these two, we find that he dined at the Astrologers' Feast at the White Hart. Throughout all his *Diary* Ashmole records all the various times when he attended these feasts. He also tells us that one year he was elected Steward of the group. The friendship with Lilly continued and became increasingly strong, so that in his latter days Ashmole and his wife would stay for months at a time with Lilly and his wife in their home at Walton, after Lilly went there to practise as a physician. One feels the undercurrent of sadness in the later entries of the *Diary* as he records one after the other the deaths of his various friends, "my father Backhouse," Sir Jonas Moore "my old friend," Mr. Lilly, Sir George Wharton, and Mr. Saunders.

Ashmole's whole life was colored by Wharton's having taught him Alchemy. He began to search for alchemical books and tracts and bought one of Dr. Dee's. He edited and published this in 1650. It was not until twenty years later that he obtained Dr. Dee's library.[6] However, by 1652 he had collected, edited and published no less than twenty-nine alchemical tracts under the title of "*Theatrum Chemicum Britannicum,* containing several Poetical Pieces of our famous Philosophers who have written the Hermetic Mysteries in their own Ancient Language." Actually, the volume contains twenty-nine Old English poems on Alchemy. It includes the *Ordeal of Alchimy,*[7] written by Thomas Norton of Bristol, the *Compound of Alchymie* by Sir George Ripley, Canon of Bridlington, Yorkshire, concerning the Twelve Gates, a treatise that was dedicated to Edward IV:

> Here beginneth the Compound of Alchymie,
> Made by a Canon of Bridlington,
> After his learning in Italy. . . .

showing that alchemy was still being taught and practised on the Continent in Ripley's time. Ashmole's book also contained an

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[6] *See* Appendix X.
[7] No two authors ever spell "alchemy" the same way.

English translation of the *Secretum Secretorum* made by John Lydgate, Monk of St. Edmundsbury. In the Translation of the Second Epistle of King Alexander to his Master Aristotle, we read: "How Aristotle declared to the King Alexander of the Stone":

> I have asked Philosophie how I should
> Have of her the thing I would,
> She answered me, When I was able,
> To make Water malleable,
> Or else the way if I could find,
> To measure out a yard of Wind,
> Then shalt thou have thine own desire,
> When thou can'st weigh an ounce of Fire.
> Unless that thou can'st do these three,
> Content thyself, thou gettest not me.

From the various tracts, it would appear that, whereas people nowadays are inclined to think that the old alchemists were merely very poor chemists trying to convert metals, this was not always their final objective. Actually, the greater ones were not only the scientists of their day, but they were men striving to find a practical philosophy. Whereas philosophers today try to make philosophy a purely abstract thing, the old alchemists, being aligned with the tradition of Greece, Egypt and Babylon, saw that philosophy should be based on physical reality and on transmutation of substance. The divorcing of the two studies of Philosophy and Chemistry is a matter much to be regretted, for changes in consciousness, or the admixture of a new idea with an old one, in a person, will often create a result that is just as remarkable as combining, say, two gases like Oxygen and Hydrogen and making a liquid which we call water. What the old alchemists would have tried to do would have been to decide carefully what type of mental consciousness could be compared with Oxygen and what type could be compared with Hydrogen, and then to have experimented until they found a stage of consciousness which they would have termed Water. Changes in ideas and in consciousness may be far from being haphazard. We know that they have profound effects on health (and disease), and health reacts on mind and on disposition. Philosophy today may take some cognizance of such matters but there is as yet no official pronouncement of any definite nature. Ashmole tells us that the major thing the greatest alchemists tried to do was to use their knowledge to heal disease. He says: "Thus did I.O. (one of the first four Fellows of the Fratres R.C.), curing the young Earl of Norfolk of the Leprosie, and Dr. B. in carrying off the virulency of small pox in the time of Queen Elizabeth."

The alchemists worked with symbols, and as always with symbols, there is an inner and an outer meaning, or as they put it, "God is able to say many things in one." The drawback of using symbols, however, is that many of their results are so hidden in symbol that people today are inclined to think they obtained no results of consequence, in either the physical or the metaphysical world. Astrology, which also uses comparable symbols, has much the same difficulty in making its knowledge known to the world. What is easily comprehensible in, say, two or three symbols, to one who knows a little astrology, is more comprehensible to one who knows more astrology,—"To know more, you must be more," as the saying goes. For example, if some one asks me what I think of the German-Russian war, I might reply "Mars opposition Neptune." Now, this is comprehensible as it stands, that one planet is opposite to the other in longitude, but that is all. On the other hand, if I make the same statement to a practised astrologer he will immediately know what I think of the whole situation, because the war started under this configuration which will therefore affect its whole progress. But, again, we are faced with the fact that an explanation of this would require pages and pages to make it clear even to the amateur. The practised astrologer, too, carries in his mind enough knowledge of planetary positions at various dates, to know the approximate period or periods when two factors (planets) will affect one another and cause changes in outlook, and in events. He can verify the exact date of these positions later, but he cannot become a good astrologer unless dowered with some innate awareness in his consciousness, of a potentiality which will be expressed by present conditions in relation to later conditions affecting the present. It is somewhat comparable to the innate feeling a musician has that the notes and bars he is playing must eventuate in certain other notes and bars, at certain stages of the composition. Hence, when I say the German-Russian war is described by Mars opposite Neptune, a practised astrologer understands that I am taking cognizance, not only of the past condition of these two planets, but also of their relative movement and motion as it will affect the future, for in this relative movement, other factors must, in the eternal scheme of motion, affect them too—eclipses, lunations and so on. Thus my statement in three words means, to any good astrologer, something that affects past, present and future, and it is a statement that might take a whole book to explain, though, as I have said, it is still intelligent as a bare statement of a certain fact that happened in the heavens in June, 1941, when the war began. It would also take several pages of explanation to tell how I logically derive which of the countries is under Mars and which is under Neptune. Evidently the old alchemists worked in some comparable way, understandable only, in its fullest sense, by those who were deep students, and sounding either trite or foolish to those who do not understand the groundwork. Someone has said that if the Philosopher's Stone had been a stone, it would never have been called a stone. If it had been a tincture, it would never have been called a tincture, and if it had been an elixir, it would never have been called an elixir. I think its term, "the quintessence," if we consider this as an attempt to understand not merely the fourth dimension but the fifth, would come as near the mark as any I can conceive.

In his *Diary* for January 26, 1652, Ashmole says: "The first copy of my *Theatrum Chemicum Britannicum* was sold to the Earl of Pembroke. 6 p.m." Doubtless, he made a horoscope for this. Then, under the date of February 11 of the same year, he says, "About this time I began to learn Hebrew of Rabbi Solomon Frank." Evidently, he found that many of his alchemical tracts were in this language, also that some of his kabbalistic lore required this language. Ashmole met most of the well-known personages of his time, nobility, clergy, scientists and writers, including the diarists Evelyn and Pepys. However, he preferred meeting people with astrological or alchemical interests. He speaks of meeting, on December 4, 1675, "Mr. Butler, Chaplain to the Duke of Ormund and an able astrologer." On March 7, 1651 he records that he met Dr. Fludd for the first time. Then, in his *Diary* [8] for April 3, 1651, he speaks of meeting "a venerable Rosicrucian" named Backhouse, who asked him to call him "father." He appears to have been in close touch with Backhouse until 1662, when the old man was taken sick. Ashmole says that on May 13 "about one of the clock he told me in syllables, the True Matter of the Philosopher's Stone, which he bequeathed to me as a legacy." Then, on May 30, 1662, he records: "My Father Backhouse died this evening." In 1660, Ashmole had been appointed Windsor Herald by Charles II, and while in this office he made descriptions of the medals in Windsor Castle, and wrote his very notable book, *The History of the Order of the Garter,* prefacing this with a history of the forty-six old crusading orders of religious-military knights, and the forty-six definitely military orders of knights.

In 1667, he says, "I bought Mr. John Booker's Study of Books and gave forty pounds for them." On June 12, 1681, he says, "I bought Mr. Lilly's Library of Books of his Widow for fifty pounds." I believe both these sets of books are now in the Bodleian Library.

Ashmole's influence seems to have been profoundly felt in his own period and continues to be felt today, due to the fact that he founded the Ashmolean Museum and because he was so interested in all antiquarian research and in natural history. There is no doubt that it was due to his geniality and graciousness that the astrologers of the period put forth such fine work, and undertook so much research. Ashmole was knighted in 1677 and died May 18, 1692.

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[8] Ashmole's *Diary,* Oxford University Press reprint.

William Lilly (May 1, 1602-June 9, 1681), born in Leicestershire, was one of the best known of the astrological writers and practitioners of the time. His textbook, *Introduction to Astrology,* is still widely read. He seems to have been quite a genius in horary astrology as well as in genethliacal, for in this textbook he gives a large number of horary charts, and charts of specific events. The ones that afford general interest today are: first, the chart set up for the time when Charles I erected his standard at Nottingham, from which chart Lilly explains why he deduced that the Royalist party could not win and how the chart predicts the death of the king himself; second, the chart of the execution of Charles (witnessed by Lilly), which he takes as the birthchart of the Commonwealth. From this latter wheel he explains why he foresaw that the Commonwealth would be replaced by the accession of a successor to Charles I within eleven and a quarter years. It began January 30, 1649, and ended when Charles II was crowned, April 23, 1661. Lilly also wrote *The True Histories of King James I and Charles I* (1651).

He bought the astrological library of the Rev. A. Bedwell, former chaplain to Sir Harry Wotton. Among these books, he says, were "my choicest books of astrology." Then, in 1634, from another astrologer named Hart he bought Argol's *Primum Mobile.* In his entries for 1634 he tells us that that year he really had time to read his books and found that Valentine Naibod's *Commentary upon Alchabitius* was one of the profoundest, and that it set him seriously working upon the Jupiter-Saturn conjunctions.

He seems to have started to teach others almost as soon as he knew anything himself, for he notes that "In year 1634, I taught Sir George Peckham, knight, astrology." Then we go on to a very extraordinary story for that year:

> In the same year Davy Ramsay, his majesty's clockmaker, had been informed that there was a great quantity of treasure buried in the cloister of Westminster Abbey. He acquainted Dean Williams. . . . Davy Ramsay sought out John Scott who pretended to use mosaical rods. . . . I was desired to join with him. . . . One winter's night . . . we entered the cloisters. . . . [It seems that a wind suddenly rose, and they were all petrified with fright, for Lilly goes on] I gave command to dismiss the demons. . . . I could never since be induced to join in any such endeavor.

Lilly also mentions the astrologer Geoffrey Neve (sometimes called Geoffrey Le Neve). He says the latter called on him with the idea of publishing forty charts from which true judgments had been deduced. Lilly looked them over and found that thirty he checked were cast wrongly, so he told Le Neve that he would take no further interest in such a book. Lilly's *Catalogue of Astrological Authors*[9] is a most interesting record. It proves conclusively that at the time he wrote, books on astrology from the most ancient sources, from Ptolemy and the Arabs down through later times, were being published in every country in Europe and that there had been no lack of interest before Lilly's time. In this *Catalogue* Lilly inserts three authors who wrote against astrology: Dr. Chamber, Savonarola and Sextus Heminga. I am inclined to think their insertion means that Lilly asked his secretary to write out the names of books in his own library, when he made the compilation. Lilly's *Christian Astrology* was published in 1647. Besides being a noteworthy textbook on astrology, written in English and not in Latin as were most of the preceding textbooks, it contained a Table of Houses for Latitude 50 degrees North, a matter which was a great help to students at that time, when equipment was not easy to procure. One commentator, or was it a historian, who had probably never read the book, wrote "Christian Astrology! Bah!!" I am afraid it was merely the title that upset the critic, who instead of looking into the matter for himself took the word of some interested person, that astrology is anti-Christian. Lilly uses the term "Christian" to show that his book was based more on Christian writers than on Arabic and Moorish writers. Among the clerics of the period who attacked Lilly most vehemently was the Rev. Thomas Gataker. In recounting this episode to Ashmole, Lilly remarks comically, "I only wrote 'senes bis pueri' [old men are twice children], and he wrote 42 pages against myself and astrology."

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[9] *See* Appendix XI.

Christian Astrology was written in three parts. The author states that he wrote the first part, which deals with astrological terms and the erection of charts, after comparing notes with the books of Dariot, Bonatus, Ptolemy, Haly, Etzler, Dietericus, Naibod, Hasfurtus, Zael, Tanstettor, Agrippa, Ferriers, Duret, Maginus, Origanus and Argol. The second part, which deals with Horary Astrology, he states was written after referring to Bonatus, Haly, Dariot, Leupoldus, Pontanus, Abenezra, Zael and Alkindi. The third part, which is on the art of reading and directing, was compiled after referring to Leovitius (who, Lilly claims, standardized the art of nativities), Junctinus, Pezelius, Naibod, Cardan, Garceus, Schonerus, Albubater, Montulmo, Abraham Judaeus (Abenezra), Ptolemy and Lindholt.

This would seem to be a very imposing number of authorities, still available in Stuart times, but in his *Catalogue of Authors*[10] Lilly gives nearly two hundred authors still extant in his time. All Lilly's friends hailed with delight the publication of *Christian Astrology*. Booker wrote a poem for it, and so also did another friend, Will Roe,—probably an anonymous writer, who said:

Behold Uranis with a Lilly deckt,
Presents herself to England's Gracious View,
Let Envy's square, or opposite aspect
Not dare at her a frowning look to shew,
Lest it be said, for such ungrateful scornes,
A Lilly late has sprung among the thornes.

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[10] *See* Appendix XI.

Elias Ashmole was sick in bed when the first copy was sent to him. He read it right through, from beginning to end, and inspired by Booker's verses, wrote his own on the fly-leaf:

I have read your Booke. . . .
. . . teaching me how to reade
The mind of Heaven in English, and not dread
It to be Conjuring; So that by your paines
No roome for that black scandall remaines.
You are our English Atlas; you support
Astrologie's fair Credit.

Lilly also supplied the popular demand for calendars and almanacs. These might have been more profitable but James I gave legal monopoly rights for printing all almanacs to the Stationers' Company and to the two Universities of Oxford and Cambridge. (It was not until 1775 that this monopoly was abolished.) Lilly's almanac, *Merlinus Anglicus Junior,* appeared from 1644 until 1681. This was the almanac through which he became acquainted with Booker. Also, in 1644 he started two others, the *Starry Messenger* and the *Prophetical Merlin.* Lilly says of the latter, "I had eight pounds for the copy. Before that time I was more Cavalier than Roundhead; but after that, I engaged body and soul in the cause of Parliament, but still with much affection for his majesty's person."

In the year 1648 the Council of State gave him a sum of fifty pounds and a pension of one hundred pounds per year for various services. This was the year that Cromwell turned out all the moderate members of Parliament. The remnant was called the Rump. In his calendar for 1650 Lilly stated that the Rump "stood upon a tottering foundation." For this prediction Lilly was called before Parliament. His pension was withdrawn, though as far as I know, no reason was given in actual words. If Lilly had been a less honest astrologer, he could easily have retained this pension. With regard to his honesty as an astrologer, we know that he read the chart of Richard Cromwell to his father Oliver, and gave the latter little hope that the son could remain long in power after the father's decease. Perhaps the best known of Lilly's prophecies were those given out in 1651 predicting the Great Plague in London in 1663 and the Great Fire in 1666. His cartoon on the latter shows twins falling headlong into a great conflagration and men struggling to put out the fire. The twins, or the sign Gemini, is the ascending sign of the city of London. About 1670 Lilly was licensed by the Archbishop of Canterbury to practise medicine. Elias Ashmole tells us in his *Diary* that he (Ashmole) obtained the license for Lilly, on October 8, 1670. Lilly then left London and went to live at Walton on Thames, where rich and poor flocked to him for healing. He decided on this because his astrological fame was bringing him too many idle curiosity seekers.

I have a small book, called *A Book of Knowledge*. It contains about 150 pages, on various occult arts, together with a farmer's calendar. The title page states that it was written by "Erra Pater, a Jewish doctor in Astronomy and Physic, born in Bethany, near Mount Olivet, Made English by W. Lilly, Student in Physic and Astrology." It is dated 1766. It is my impression that in spite of its claim, it was totally unknown to Lilly. Neither Lilly nor any author of his time refers to it.

In every age astrology has been the object of hatred, vindictiveness and satire, and it was not otherwise in Stuart times. Samuel Butler (February 12, 1612-September 25, 1680) included astrology in his satire entitled *Hudibras,* but he rapped almost everything else,—religion, philosophy, medicine, law and physics,—or rather what he personally conceived to be the insincere exponents of these subjects. William Lilly, as the foremost astrologer of the period (called Sidrophel in the poem) received the full fury of Butler's blast against the astrologers. Modern newspapers and magazines often treat their readers to attacks against astrologers. I have seen most of those in recent years, and still think the authors might be advised to turn back three hundred years to Samuel Butler, for ammunition. Modern attacks seem positively empty. They roar as "gently as any sucking dove,"—to use the words of Bottom the Weaver,—when compared to Butler's heavy cannonading. To Butler, astrologers were thieves, liars, rogues and vagabonds, disorderly persons, ignoramuses, and dreadful necromancers in league with the devil. Whatever modern opponents have said, was said more effectively in Stuart days, and said with real satirical humor,—and Astrology still goes forward! Charles II so enjoyed Butler's satire against the Puritans that he is said always to have carried a copy of *Hudibras* in his pocket ready to pull out whenever he recollected a phrase in it that fitted some person or event of the day. Butler takes as his hero Sir Hudibras, a thick-headed aggressive Puritan, patterned on a certain Hudibras, a character in Spenser's *Faerie Queene:*

More huge in strength than wise in work he was.

Butler [11] starts by telling us how:

When civil fury first grew high
And men fell out they knew not why;
When hard words, jealousies, and fears
Set folks together by the ears,
And made them fight like mad, or drunk . . .
Then did Sir Knight abandon dwelling,
And out he rode a-colonel-ing.

Like every knight, on his adventures he must find a "Ladye faire,"—but she must have money! So, when he lands himself in prison, a wealthy widow comes and bails him out. He woos her with poetic art, but the lady knows her value, and remarks:

You will find it a hard chapter
To catch me with poetic rapture.

Sir Knight is baffled. Alone in his house, he cries out:

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[11] *Hudibras,* by Samuel Butler.

Oh! that I could enucleate,[12]
And solve the problems of my fate;
Or find, by necromantic art,
How far the destinies take my part.

His Squire Ralph then tells him about Sidrophel:

Quoth Ralph, "Not far from here doth dwell
A cunning man hight Sidrophel,
That deals in Destiny's dark counsels,
And sage opinions of the Moon sells."

Sir Hudibras would like to be convinced that it is not against his religion to go;

Quoth Hudibras, "This Sidrophel
I've heard of, and should like it well,
If thou can'st prove the saints have freedom
To go to sorcerers when they need 'em."

when Ralph assures him:

The godly may allege
For any thing their privilege,
And to the devil himself may go,
If they have motives thereunto:
For, as there is war between
The devil and them, it is no sin
If they, by subtle stratagem,
Make use of him, as he does them.

Has not this present Parliament
A ledger to the devil sent,
Fully empowered to treat about
Finding revolted witches out?
And has not he, within a year,
Hanged three score of 'em in one shire?
Some only for not being drowned,
And some for sitting above ground. . . .

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[12] *Enucleate,* to take out of its shell.

Did not our great reformers use
This Sidrophel to forebode news;
To write of victories next year,
And castles taken, yet i' the air?
Of battles fought at sea, and ships
Sunk, two years hence? the last eclipse?
A total overthrow given to the king
In Cornwall, horse and foot next spring? . . .

Made Mars and Saturn for the cause,
The Moon for fundamental laws?
The Ram, the Bull and Goat, declare
Against the Book of Common Prayer?
And Scorpion take the protestation,
And Bear engage for reformation?
Make all the royal stars recant,
Compound, and take the covenant?

This argument convinces Hudibras:

Quoth Hudibras, "The case is clear
The saints may employ a conjurer,
As thou hast proved it by their practice;
No argument like matter of fact is."

Next we turn to a description of Sidrophel:

He had been long t'ward mathematics,
Optics, philosophy and statics,
Magic, horoscopy, astrology,
And was old dog at physiology . . .
Yet none a deeper knowledge boasted,
Since old Hodge Bacon and Bob Grosted[13]

Because astrologers are so often correct in their findings, Butler imagined, as some people do today, that astrologers hire detectives to find out all about a client before he or she arrives, so Sidrophel has a servant named Whachum, who is probably supposed to be a type of Coley, the adopted son of Lilly:

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[13] Roger Bacon and Robert Grosseteste.

Whose business was to pump and wheedle,
And men with their own keys unriddle;

Whachum's work was also to make calendars and supply suitable rhymes for these. When the knight and squire are seen from a distance, Whachum goes out to greet them, and he finds out from Ralph that Hudibras is coming to consult Sidrophel about his romance with the widow. The three then enter Sidrophel's study and Whachum gives Sidrophel clues to the problem. The clues are that Venus is in opposition to Mars, that is, the love planet Venus is not kindly. Sidrophel wishes to know if the lady is single, married or widow, hence he asks Whachum if Venus is in Virgo, to which the servant answers no. Then, the clue that she is a widow is given when the planet Saturn is mentioned. In this way Sidrophel can begin his reading by telling Hudibras that he is in love with a widow. This amazes the knight but starts him on a tirade that such could not be told by the horoscope. He rampages about all the tricks that former astrologers and conjurers have used, even brings in Agrippa's faithful dog, which was as much suspected during its life as certain witches' black cats have been:

To this, quoth Sidrophel, "Sir,
Agrippa was no conjurer,
Nor Paraselsus, no, nor Behmen:
Nor was the dog a caco-demon,
But a true dog, that would show tricks
For the emperor, and leap over sticks . . .
As for the Rosy-cross philosophers,
Whom you will have to be but sorcerers,
What they pretend to is no more
Than Trismegistus did before,
Pythagoras, old Zoroaster,
And Apollonius their master,
To whom they do confess they owe
All that they do, and all they know.

Hudibras is too thickheaded, however, to be in any way appeased by this reply. He goes on with various stock arguments, namely that the Egyptians say that the polar axis has been changed twice, also that the signs and the constellations now no longer coincide, so how can the effects still be the same? Also some people set up horoscopes for cities and some for puppies, and some for monkeys, running-nags and fighting-cocks,—and all this must be rubbish. The argument goes on until it becomes violent. Sidrophel tells Hudibras his horoscope reveals that he was robbed of his watch and chain at the last fair, whereupon Hudibras says if he knows that, it is proof the astrologer himself must have been the thief. He then beats up Sidrophel and Whachum and proceeds to search Sidrophel's pockets. He does not find his own watch but he finds another one and also:

A copper-plate, with almanacks
Engrav'd upon it, with other knacks
Of Booker's, Lilly's, Sarah Jimmers',
And blank-schemes to discover nimmers;
A Moon-dial, with Napier's bones,
And several constellation stones,
Engraved in planetary hours,
That over mortals had strange powers
To make 'em thrive in law or trade,
And stab or poison to evade;
In wit or wisdom to improve,
And be victorious in love.

Let us turn to the other side of the picture as presented by an astrologer. Our nineteenth century astrologer Zadkiel, or Commander Morrison, in his Preface to the new edition of William Lilly's *Introduction to Astrology,*[14] gives a brief outline of Lilly's life. He tells us that:

> Lilly in his sixty-sixth year undertook to write a history of his own life for his worthy friend, Elias Ashmole Esquire, afterwards Sir Elias Ashmole, the founder of the celebrated museum which bears his name.

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[14] Reprinted in *Bohn's Library* (G. Bell and Sons, 1927).

Mr. Ashmole made marginal notes therein, which testify his high opinion; and fortunately for the cause of astrology, this gentleman verified the correctness of the Figures of Heaven (Horoscopes) which are given in subsequent pages. (It seems that Ashmole initialled all his remarks.)

The following is a résumé of the remainder of Zadkiel's Preface: Lilly arrived in London, April 3, 1620, where he became footboy in a family. When the mistress died she left him a legacy of five pounds in gold. His master married again and gave him twenty pounds. During this period Lilly started to become an astrologer, and studied from twelve to eighteen hours a day. At the outbreak of the Civil War he was consulted by both General Fairfax and King Charles. Lilly once remarked of this latter visit:

"I told him to go east, and he went west." In 1651 he published *Monarchy or No Monarchy,* and in this were the hieroglyphs of the Great Plague and of the Fire of London. In 1666 the fire occurred, and Lilly was called upon again, by a Parliamentary committee, to inquire if he didn't start the fire to make his prediction come true. They do not seem to have asked him if he started the plague. However, he was acquitted. He testified that he did not foresee the exact year or date of the Fire. He died June 9, 1681, outliving his satirist Butler by one year. His friend Elias Ashmole officiated at the funeral and also erected a monument "in loving memory," in Walton Church, on the left side of the communion table.

Lilly's Epistle to students desiring to learn astrology is very indicative of his high motives. Zadkiel quotes:

> As thou daily conversest with the heavens, so instruct and form thy mind according to the image of Divinity; learn all the ornaments of virtue, be sufficiently instructed therein . . . let no worldly wealth procure an erroneous judgment from thee, or such as may dishonor the art. Be sparing in delivering judgment against the common-wealth thou livest in . . . be faithful, tenacious. Betray no one's secrets. Be not dismayed if ill spoken of. . . .

In the light of Butler's attack, this last sentence is particularly poignant. It seems that Lilly was apparently a very sweet and loving personality. He was also a good scholar, and was interested in all the developments of astrology, both in England and on the Continent.

Henry Coley (October 18, 1633) was the adopted son of William Lilly and from the year 1677 until the death of Lilly, his assistant. Coley was said to have been a better technician than Lilly but he had not Lilly's "art," so here we see exemplified just what Lilly meant,—that one may know all the methods, but if one has not "art," one can never be a great astrologer. In 1669 Coley published his textbook, *Clavis Astrologiae Elimata,* or the *Key of Astrology Polished Up*. In 1671 he started to publish his *Ephemerides* which were gladly bought, for planetary positions were not easy to obtain at the time. He also continued with Lilly's Almanac after the death of Lilly.

Lilly's friend, John Booker (March 23, 1603-April 8, 1667), came from Manchester, where the fame of Dr. John Dee must have been still in remembrance when he was a child. From early years Booker seems to have been a good mathematician and always interested in almanacs. He was in London in 1631, for in that year he brought out an almanac called *Telescopium Uranium*. He was clerk to various aldermen and then obtained a governmental position as "Licencer of Mathematical Books," a position which seems to have meant, or at least included, the work of censoring astrological publications. It was in this capacity that he met Lilly in 1644, and although the meeting started with an argument, it led to a lifelong friendship. Lilly, in August, 1644, wished to bring out his *Merlinus Anglicus Junior* and showed the copy to Sir Bulstrode Whitlocke, who liked it so much that he in turn showed it to many of his friends in the House of Commons, and they all wanted copies. Lilly then had to apply to Booker to license it, and Booker, as Lilly remarks, "made many impertinent obliterations." Then the printer, "who was an arch-Presbyterian," suspected Lilly's religious foundation and the almanacist had to be examined in the faith by no less than five ministers. Lilly was very angry, not so much at the religious examination, which he apparently passed without trouble, but at the red ink obliterations, and he complained to several of the members of Parliament. They took his part and ordered that thenceforth Booker should not censor Lilly's work and that Lilly should be free to print whatever he liked. In spite of all this, Booker asked Lilly to teach him astrology, and later Lilly speaks of Booker's fine mathematical skill and of his charts as being "exactly directed." The two collaborated on various works and apparently Booker wrote some sections of the various almanacs, for Lilly defended Booker against Wharton's attacks. Booker made some predictions on a solar eclipse, stating that he expected two European rulers would die at about the same time. As two did die, the matter brought him considerable notice.

Among the astronomical friends of Lilly and Ashmole was Vincent Wing (April 9, 1619–1688) of Welsh origin. Lest we might think that the astronomers of the time did not fight and quarrel as did the astrologers, we have only to read the title of one of his books, namely, *The Annihilation of Mr. J. Shakerly*. A book written against him by Thomas Streete was called *Castigation of the Envy and Ignorance of Vincent Wing*. It was in reply to one of Wing's, in which he called attention to Streete's errors. Vincent Wing published *Ephemerides* for the last sixteen years of his life. Flamsteed considered these the best on the market. Wing was an astrologer too. He, however, studied the Copernican system, and had many conferences with John Booker concerning this. John Booker wrote the story of Vincent Wing's life.

Lilly, in his Autobiography, praises the mathematical and astronomical skill of Doctor Richard Napier and of his nephew Sir Richard Napier. Both of these were distantly related to the famous laird who invented logarithms. Doctor Richard Napier (1559–1634) had been ordained for the ministry but preferred being a medical astrologer. He became a student of the very curious character, Doctor Simon Forman, who was a medical astrologer and an alchemist, who later bequeathed to him his library. Doctor Napier spent his whole life doing good to people and in researching into astrological methods. Lilly became acquainted with him through Forman and stayed at his home in 1632 and in 1633, which later period is the time when Lilly started to take up astrology in real earnest as a profession. Doctor Napier left all his books to his nephew Richard (1607–1676), who was interested in all his uncle's studies and who during vacation time from Oxford was instructed by him, so that he too became a very fine medical astrologer. He took his degree at Oxford in 1642 and was knighted in 1647. He was one of the really fine scientists of the day, and most helpful in the formation of the Royal Society.

The Simon Forman (1552-1611) who taught Doctor Richard Napier, was born, so he tells us in his Autobiography, on "December 30, at 85 minutes after nine o'clock [15] at night . . . in a village called Quidhampton in the county of Wiltshire." Simon tells us that his father loved him the best of all his family. In early life he continually dreamed of great mountains about to fall on him and of great waters raging against him, but somehow he always came out on top of the mountains and he always came safely through the seas. These dreams, he says, evidently presaged the terrible troubles he was to undergo later in life. He first was apprenticed to a hosier and then to a merchant of cloth. Later, he became a teacher and finally tramped to Oxford, and by dint of a scholarship managed to exist, his father having died meanwhile. Apparently he did not take his degree at Oxford but, later, at Cambridge. In 1581 he tells us he was curing the sick and the lame. In 1588 "this year I began to practise necromancy and to call aungells and spirits." In 1590 he wrote a book on alchemy, and in 1594 he practised what he calls The Philosopher's Stone, that is, alchemy.

Lilly knew Doctor Forman quite well, for Forman had on one occasion healed Lilly's old employer of an obsession. However,

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[15] 10:25 P.M.

Lilly's real friendships were directed more towards the mathematicians than towards the psychics. Among the former was Nicholas Fiske, whom he never ceases to praise:

> My ancient learned friend Mr. Nicholas Fiske hath freely lent me either his manuscripts or any books in his library, nor am I more beholden to the father than to the son, Mr. Mathew Fiske, who at all times gave me the exact places of the planets, and calculated for me several of the schemes of the conjunctions of Jupiter and Saturn for 1603, 1645 and 1663.[16]

Evidently the Fiskes had copies of the Rudolphine Tables, which had been made by Kepler, for when writing of these conjunctions Lilly mentions that they were calculated from the Rudolphine Tables. Lilly says he met Nicholas Fiske in 1633 and that "he was exquisitely skilful in the art of directions upon nativities. By frequent conversation with him, I came to know which were the best authors, and much to enlarge my judgment, especially in the art of directions."

John Gadbury (December 31, 1627–1704) was born at Wheatley near Oxford. He started to study astrology in 1652 and brought out Ephemerides in 1659. His almanacs ran from 1657 to 1666. He is best known for his *Doctrine of Nativities* (1659). He included a Table of Houses for latitude 40 degrees North. In the same year Gadbury also published a horoscope of the ill-fated Charles I. Cromwell had died the preceding year and discussion was rife as to whether or not the royal family should be recalled. Gadbury was on the Royalist side. He was therefore more than pleased when Charles II was recalled, and in the year of the latter's accession, he brought out his calendar under the title of *Britain's Royal Star,* the "Star" being Charles II. In 1662 he published *Collectio Geniturarum,* that is, a collection of various notabilities past and present. In 1683 he made a very valuable contribution to astrology by collecting the works of Wharton, whom he calls "that most excellent Philosopher and Astronomer." In this book Wharton's knowledge of the festivals and feasts of Christianity is preserved, also his observations on the nativity of the world, the annual revolution charts or ingress charts, the mutations of Saturn and Jupiter, and on passages from Morinus. The following year Gadbury published *Cardenes Coeli,* in reply to an anonymous critic, who quoted Gassendi's *Contra Astrologiam.* He also wrote in 1669 *The Life and Death of Vincent Wing,* the astronomer-astrologer. Altogether, Gadbury appears to have been a very hard-working student and researcher, and if some astrologers of recent years have questioned the accuracy of various charts in his book, at least he left us data which might otherwise have been lost. I think the fact that he was buried in St. Margaret's Church, Westminster, speaks for his religious views and general respectability. It seems that William Lilly disliked the sign Scorpio, for Gadbury spends a great deal of time justifying that sign against Lilly's attacks. Gadbury had the Sun in Capricorn but he had Scorpio rising. It was in this argument against Lilly's views that Gadbury and his student Partridge fell out and Partridge wrote a pamphlet in 1675 which he described as: "A just reward for unreasonable service: or an answer to J. Gadbury's late Hectorisme for Scorpio; wherein his malicious invectives against Mr. Lilly are fairly wiped off." He then went on to write, *The Black Life of John Gadbury,* but later he repented and the two became friends again. Yet even in 1677 Gadbury was so full of the idea that he must justify the sign Scorpio, that he wrote *The Just and Pure Scorpionist.* A more difficult matter to straighten out was an accusation of plotting against King William III, but fortunately he was acquitted of the charge.

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[16] *Prophetical Merlin,* (1644).

Another of Ashmole's very dear friends was Richard Saunders. In his *Diary* for 1651, under date of April 3, Ashmole records:

> The Astrologers' Feast at Painters' Hall, London. This night about one o'clock I fell sick of a surfeit by drinking water after venison. I was greatly oppressed in my stomach; and next day Mr. Saunders, the astrologian, sent me a piece of bryony root to hold in my hand, and within quarter of an hour, my stomach was freed of that great oppres-

sion, which nothing I took from Doctor Wharton [Ashmole's personal physician] could do before.

Ashmole continued the friendship with Saunders, for we have reference to Saunders' death on December 23, 1675 between 10 and 11 A.M. Saunders wrote a book on Medical Astrology and William Lilly wrote an Introduction for it. Dr. Len Broughton, astrologer-physician of the nineteenth century, considered it to be the best book that had ever been written on medical astrology.

Nicholas Culpepper (1616-1654), famous as the author of *Culpepper's Herbal,* used astrology in the treatment of his patients. He set up an office in Red Lion Street, London, in the year 1640 where he practised both as a physician and as an astrologer. He spent much time writing textbooks, both on herbs and on the practice of medicine. In these books he shows familiarity with the Arabian physicians and with the Spanish school of doctors that included Abenezra and Avenzoar. In 1649 the full fury of the medical profession of the day was vented against him, for in this year he brought out an unauthorized translation of the *Pharmacopoeia,* and as this had been the monopoly of the medical profession, we can imagine the excitement.

In 1642 Sir Thomas Browne, who had travelled widely through Europe, published his *Religio Medici,* or the *Religion of a Physician.* He speaks of himself as having Scorpio rising and Saturn too.

In 1649 Dr. William Salmon published his *Horae Mathematicae* which has for its sub-title *The Soul of Astrology.*

In 1652 Ramesey published *Astrologia Restaurata,* in which he reminds his readers that Hippocrates and Galen had said that a physician cannot safely give physic unless he knows the positions of the moon and planets. Ramesey was also a great exponent of Mundane astrology.

John Whalley (April 29, 1653–January 17, 1724) has oftentimes been referred to as an ignorant Irish cobbler who made money at odd times, both in Ireland and in England, by publishing almanacs such as *Vox Urani,* which was later called *Advice from the*

Stars, and *England's Mercury*. However, though he was a shoemaker by trade, he was at least sufficiently interested in astrology to learn Latin so that he could translate Ptolemy's *Tetrabiblos* into English—a task from which most of his critics would shrink. Some of his critics either forgot to mention this matter or were too ignorant to know what he did. This translation may not have been of the best, and it needed much emendation, but it provided something that all English astrologers were most grateful for until newer translations were made.

George Parker (1651-1743), renowned among astrologers for his Ephemerides, was a cutler by trade, born in Worcestershire. He and the astrologer John Partridge were the greatest enemies and they lived within a stone's throw of each other. Partridge attacked Parker in his Almanac, in an essay called "Character of a Broken Cutler." Later, we shall deal with Dean Swift's attack on Partridge. One might think that Parker would have been pleased with the Dean's attack, but quite the contrary was the case. Apparently, astrologers will always rush to the help of other astrologers when someone from the outside makes an attack. Parker's Almanac was called *Mercurius Anglicanus*. It started in 1690 and was continued even after his death. Parker also collaborated with John Gadbury in editing the latter's Ephemerides.

Chapter 21

ASTROLOGY IN THE LATER SEVENTEENTH AND EIGHTEENTH CENTURIES

We will add one thing more, that we are certain the celestial bodies have other influences besides light and heat. Let this astrology be used with greater confidence in prediction, but more cautiously in election, and, in both cases, with due moderation.

FRANCIS BACON

JOHN DRYDEN the poet (1631–1700) was a firm believer in astrology. Samuel Johnson, who believed in witchcraft,[1] did not believe in astrology, hence in his *Lives of the Poets,* he makes this comment on Dryden:

> One of his opinions will do him little honor in the present age. He put great faith in the prognostications of judicial astrology. In the appendix to the *Life of Congreve*[2] is a narrative of some of his predictions wonderfully fulfilled . . . in his Preface to his *Fables,* Dryden has endeavored obliquely to justify his superstition, by attributing the same to some of the ancients. The letter, added to his narrative, leaves no doubt of his notions, or practice.

The letter which Johnson appended is one which Dryden wrote to his sons, who were then in Italy on vacation. In it Dryden writes:

> Towards the latter end of this month, September, Charles will begin to recover his perfect health, according to his nativity, which casting it myself, I am sure is true, all things hitherto have happened according to the very time I predicted them.

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[1] *Life of Samuel Johnson,* by James Boswell (Vol. 4, Chap. 2).

[2] Wilson's *Life of Congreve.*

The son, Charles, of whom Dryden wrote, had fallen from a ruined tower of the Vatican grounds. Charles seems to have had more than one accident which brought him close to death. The narrative concerning Dryden and his son Charles' horoscope is paraphrased by Broughton [3] as follows:

> When Mrs. Dryden* commenced in labor of her son Charles, Dryden left his watch in charge of one of her ladies in attendance, with a strict injunction to notice the exact moment of the child's birth. In about a week after her confinement Mr. Dryden took the occasion to tell his wife that he had calculated the child's horoscope and had observed with grief that the child was born in an evil hour. That Jupiter, Venus and the Sun were all under the earth, and the lord of the Ascendant was afflicted with a baleful square of Saturn and Mars. He went on to tell her that if he lives to his eighth birthday he will come near a violent death, but if he escapes that, and I see small hopes that he will, in his twenty-third year he will again be under the same evil direction, and if he escapes that also, the thirty-third and thirty-fourth years will, I fear . . . There he was interrupted by the grief of Mrs. Dryden, who could not longer hear one calamity after another prophesied for her new-born son.
>
> When young Dryden arrived near his eighth year, it was arranged that Mrs. Dryden should spend the summer vacation with her Uncle Mourdant, and Mr. Dryden was invited to the country seat of the Earl of Berkshire, his brother-in-law. . . . Dryden insisted on taking Charles and they parted in anger.
>
> On the child's eighth birthday it was arranged by the Earl of Berkshire that his guests should go hunting, and Dryden, to keep the child out of mischief, set him a double lesson in Latin, with a strict injunction that he should not go out of the house. Charles was performing his duty in obedience to his father, but as ill fate would have it, the stag made towards the house, and the noise alarming the servants, they hastened out to see the sport. One of the servants took young Dryden by the hand, and led him to see it also; just when they came to the gate, the stag being at bay with the dogs, made a bold push and leaped over the court wall, which was low and old, and the dogs following,

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[3] *Elements of Astrology*, by Broughton (1926).

* Lady Elizabeth Howard

threw down a part of the wall ten yards in length, under which Charles lay buried. He was immediately dug out, and after six weeks languishing in a dangerous way, he recovered. In the twenty-third year of his age, Charles fell from the top of an old tower belonging to the Vatican at Rome, occasioned by a dizziness with which he was seized, the heat of the day being excessive. He again recovered, but was ever after in a languishing sickly state. In the thirty-third year of his life, being returned to England, he was unhappily drowned at Windsor. He had, with another gentleman, swum across the Thames twice, but returning a third time, it was supposed he was taken with a cramp, because he called out for help, though too late. The father's calculation proved but too prophetical.

The statement of Dr. Johnson that Dryden justified his belief in astrology in his Preface to the *Fables* is no doubt based on the following passage in the Preface:

> With Ovid ended the golden age of the Roman tongue; from Chaucer the purity of the English tongue began. The manners of the poets were not unlike; both of them were well bred, well mannered, well matured, amorous and libertine, at least in their writings, it may be also in their lives. Their studies were the same, philosophy and philology. Both of them were known in astronomy, of which Ovid's books of the Roman feasts, and Chaucer's Treatise of the Astrolabe, are sufficient witnesses. But Chaucer was likewise an astrologer, as were Virgil, Horace, Persius and Manilius.

Evidently, Johnson read the classics for style but Dryden read them for subject matter. Dryden occasionally brings astrological concepts into his own poetry. In his *Annus Mirabilis,* the Year of Wonders (1666) Dryden celebrates various sea battles against the Dutch, who were allied with the French at that time. He mentions the King's interest in the newly formed Royal Society, of which Dryden was a member, a scientific group which had started during the Civil War with a few men visiting and conferring with one another. He then goes on to describe the Fire of London which broke out in October and which lasted for four days and four nights. According to Dryden, the end was quite a miracle (Stanza 281.):

> An hollow crystal pyramid He takes,
>   In firmamental waters dipt above;
> Of it a broad extinguisher He makes,
>   And hoods the flames that to their quarry strove.

Later he says:

> The utmost malice of the stars is past,
>   And two dire comets which have scourged the town,
> In their own plague and fire have breathed their last,
>   Or dimly in their sinking sockets frown.
>
> Now frequent trines the happier lights among,
>   And high-raised Jove, from his dark prison freed,
> Those weights took off that on his planet hung,
>   Will gloriously the new-laid work succeed.
>
> Methinks already, from this chymic flame,
>   I see a city of more precious mould. . . .

There was a comet coincident with the Plague the year before, as well as one that coincided with the time of the Fire.

Dryden also wrote a play called *An Evening's Love, or the Mock Astrologer,* which Morley describes as "a careless version of the French comedy *Le Feint Astrologue,* by Corneille's younger brother, Thomas."

John Partridge (January 18, 1644–June 24, 1715) was, like Whalley, originally a shoemaker. However, he learned Latin, Greek and Hebrew in order that he might fit himself to be a good astrologer. He was taught by Gadbury, and at the age of eighteen he started to study Lilly's books on astrology. He fell out with his teacher John Gadbury because the latter wrote against Lilly, but later a reconciliation took place. Then, about the same time, he had a violent quarrel with George Parker. Partridge was most interested in medical astrology and went to the Netherlands to study medicine, taking his degree of M.D. at Leyden University. Some say he was physician to Charles II and some say to James II. There seems to be considerable doubt on the matter. In 1678 he published his *Astrological Vade Mecum,* in 1689 *Merlinus Liberatus,* and his greatest book, *Defectio Geniturarium,* in 1697. Partridge was in many ways the most progressive of the astrologers of the Stuart times, for during his studies on the Continent he read the *Primum Mobile of Placidus de Titus,* a book which, though not translating Ptolemy, was a textbook founded on the methods of Ptolemy rather than on Arabian concepts of Ptolemy's methods. Partridge realized the value of this book immediately and used these methods in his own textbooks. Zadkiel (Commander Richard J. Morrison, R.N.) in the Introduction to his *Grammar of Astrology*[4] (1853) speaks with very high praise of Placidus, and of Partridge's acceptance of the latter's views. However, he felt it necessary to do this at the expense of Lilly and of the early seventeenth century astrologers, rather forgetting that if it had not been for these earlier astrologers, Partridge might never have learned astrology at all. I quote from Zadkiel:

> The principles of Ptolemy's doctrine do not appear to have been very clearly understood, or acted upon, free from the superstitious trash of the Arab writers, before the years 1647 and 1657, when Placidus de Titus, a Spanish[5] monk, first published the true system of astrology, founded upon Ptolemy's mathematical calculations. His principal work was printed in Latin, and called the *Primum Mobile,* or First Mover. It is remarkable that the only subsequent works of any value on that part which is of most importance, nativities, were written by an Englishman, Mr. Partridge, whose Almanack is still in existence. His works the *Opus Reformatum* and the *Defectio Geniturarium,* are evidently made up from Placidus, but they are full of the soundest doctrine, and contain numerous examples.

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[4] *Grammar of Astrology* (1853). Now published, with Lilly's *Introduction to Astrology,* in Bohn's Library.

[5] See Ashmand's statement on page 326 of this chapter.

> No good translation of Placidus appeared in English until that made by Mr. John Cooper in 1816; nor did any correct copy of Ptolemy's book, from which all that we know of astrology is originally derived, until 1822, when Mr. Ashmand's excellent work appeared. The old translations of Ptolemy and Placidus, especially those of Dr. Sibley, are detestable, and have made numerous erring astrologers, and done the science infinite injury. All the host of English astrologers, such as Lilly, Coley, Sibley, Gadbury, White, etc. (Partridge excepted) were embraced in error when they treated of nativities; for they embraced the follies of the Arabian astrologers, which consisted of mixing up the system of divination, called horary questions, with the genethliacal art, or science of nativities; and those who open their books only lose their time.

This is extreme language. That Zadkiel did not mean what he says is apparent when he brought out almost immediately after this a new and revised edition of Lilly's *Introduction to Astrology* and wrote a glowing tribute to Lilly in the Preface which you have read in part in our previous chapter. Lilly was an adept in Horary Astrology and when we read his books we find he gives us very many illuminating examples of his answers to questions. Zadkiel was simply of opinion that Lilly should have obtained these answers from the birth charts. Lilly, however, was a practising astrologer, who knew what he was doing, and it would appear to me that when a man was as unerring as Lilly in Horary work, he had the right to use in his practice whatever system he preferred.

Concerning Placidus, Ashmand states[6]:

> It would appear by the printed works of this author, that he was Didacus Placidus de Titus. He was a native of Bologna, by profession a monk, and was styled Mathematician to the Archduke Leopold William of Austria. He wrote in the earlier part of the seventeenth century, and his work now cited, is considered to contain the most successful application of Ptolemy's astrological rules of practice.

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[6] J. M. Ashmand, *Ptolemy's Tetrabiblos* (Foulsham Co.)

Since Partridge, then, was one of the most painstaking of our astrologers and one of the most reliable of the new Placidean-Ptolemaic exponents of astrology, one can only feel that Dean Swift berated and injured an astrologer who really deserved better treatment. Dean Jonathan Swift, under the pseudonym of Isaac Bickerstaff, brought out an almanac in which he pretended he was Partridge's astrological rival, and in this he predicted Partridge's death as due to occur on March 29. Later, he published another one in which he gave a full and detailed account of his fulfilled prediction of "the death of Mr. Partridge, the almanack maker on March 29." He inserted an elegy on the matter:

Weep all you customers that use
His pills, his almanacks, or shoes.

One has a feeling that the venerable dean was suffering from an upset stomach on the day when he conceived all this.

I have previously mentioned that the Stationers' Company had a monopoly on Almanacs. They believed that Partridge was really dead and struck his name from their rolls, so that the following year Partridge was unable to publish his almanac, and for several years afterwards he was put to the trouble of proving that he was legally alive. A number of people have described this attack as "the death blow to astrology," but astrology is made of sturdier stuff. Astrology is not dead yet, though its obituary has been written in every century by someone or another. Dean Swift, or astrologically speaking merely Isaac Bickerstaff, is often praised for this famous "joke" upon astrology in general and upon Partridge in particular, a man of infinitely superior mental equipment and who at least did not have to obtain his degree "by special grace," a term which at that time meant "special disgrace." Let us analyze the Dean's claims to tilt at astrology, apart from his general ability to write upon anything, a matter which caused "Stella," the young lady whom he treated so ungenerously, to remark upon one occasion with considerable bitterness, "The Dean can write finely even upon a broomstick." Swift received his degree at Dublin "by special grace." His mathematical and scientific equipment was practically nil. He hated so many things that his hatred of astrology was just another incident in his life. He hated Presbyterians and he hated Papists. He hated Dryden, to whom he was distantly related, not so much because of the latter's astrological studies, but because Dryden had remarked, "Cousin Swift, you will never be a poet." Evidently then, the Dean was one of those people who hate everyone who can do something better than they can. He hated and attacked Robert Boyle, who is so well remembered today for his formulation of Boyle's Law after working for years on air-pumps. Apart from being a scientist, Boyle was something of an alchemist and also interested in religious studies. He wrote a short treatise on Seraphic Love, which must have been very irritating to Swift with his hopeless romances. Then he wrote some moralizing reflections which he entitled "Occasional Reflections." Swift seized on these and tore them to pieces in a pamphlet he called "Reflections upon a Broomstick." The Dean fell out with the English language itself and put his thoughts on this matter also into a pamphlet. Dr. Johnson makes some pertinent remarks on his qualifications to do this. He says, "It was *written without much knowledge* of the general nature of the language, and without any very accurate history of other tongues." I should say the same of his attack on astrology. It was written without much knowledge of astrology, and apart from being a record of a mean practical joke, the Bickerstaffian diatribe is now consigned to the "also wrote" list of his pamphlets.

Swift died insane. His greatest satire, which is upon the whole human race,—*Gulliver's Travels,*—is now read by children, who do not know it is a satire. Time has taken its revenge upon the Dean rather than upon astrology.

Partridge's Almanac was continued after his death. The Stationers' Company bought the rights from his widow. Dr. Len Broughton, in his *Elements of Astrology,* speaks with great praise of the fine work done by Partridge in this Almanac, and then goes on to say "I have not been able to find out the year when that pious company bought the right to publish the almanack but it was probably near 1792 or 1793, as I see the predictions in those years did not require an astrologer to write them, and they gradually grew worse from year to year." Broughton speaks of the Stationers' Company as being a "pious" company, because among other things they "were engaged in sending missionaries abroad."

Since John Flamsteed (1646-1719) was a protégé and friend of Sir Jonas Moore, Surveyor of the Ordnance at the Tower of London, and Moore was Ashmole's lifelong friend, we realize that Flamsteed probably knew all Ashmole's and Lilly's astrological friends, and no doubt discussed astrology very freely with them. At one time Sir Jonas was thinking of building a private observatory for Flamsteed at Chelsea College, but before the matter was settled, Charles II had determined to build the Greenwich Observatory. Francis Baily [7] in his *Account of the Reverend John Flamsteed,* gives us the story of how the Observatory came to be built. A certain French lady who had some favor at court, was desirous of helping a French Sieur who had some very limited astronomical knowledge. The Sieur wished to receive a commission and salary to compute the exact longitude of London. Charles, always tactful, said that he could not promise until he had called a Commission of astronomical experts. On the Commission which Charles appointed was Sir Jonas Moore. He took Flamsteed along with him to the first meeting. Flamsteed immediately discovered that the Frenchman had neither the knowledge nor the necessary tables with which to do the work. The Commission conferred as to what statement they should make to the king. They did not wish to offend the French lady, so it was decided that they should try to be co-operative. Flamsteed offered his own lunar tables to the Sieur, but the latter, suspecting that Flamsteed was his enemy, declared that the "tables were feigned." Flamsteed was so indignant that he wrote him a letter telling him all he thought of his astronomical knowledge. In this he pays a great compliment to

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[7] Francis Baily, *Account of the Reverend John Flamsteed,* published by the Royal Observatory of Greenwich.

Morinus, the French astrologer, who was also an astronomer. He said, "You might have learnt better methods than you propose from your countryman Morinus." Evidently the Sieur showed the latter to the French lady and she showed it to the king, for Charles called for a conference with Moore and Flamsteed and the rest of the Commission. In the course of discussion they told him that Tycho Brahe's catalogue of stars sometimes gave an error of ten minutes or more of longitude, whereat the king said that if the star catalogues were wrong, "He must have them anew observed, examined and corrected, for the use of his seamen."

So Flamsteed writes that on March 4, 1674–5 Jonas Moore, "Brought me a warrant that designated me the King's Astronomer, with the allowance of only one hundred pounds per annum, payable at the Office of the Ordnance."

The foundation of the Observatory was laid on August 10, 1675 at 3:45 P.M. according to the election chart [8] which Flamsteed set up. For some reason modern astronomers royal are always peeved when astrologers mention this chart. They say that Flamsteed laughed at astrology. If he did, to some of the "new" astronomers who were trying to divorce astronomy from astrology, he did not laugh at it to Sir Isaac Newton. Even Halley, who was a very bitter opponent of astrology, found his match in Newton, for when Halley did, on one occasion, sneer openly at Newton's belief in this, Newton replied with quiet dignity, "I have studied the subject, Mr. Halley. You have not." It seems that Flamsteed was very hampered in his work at the Observatory, for though the government built it, they did not equip it. Sir Jonas Moore gave him the sextant and the two big clocks, but the quadrants, telescopes and other instruments had to be paid for by Flamsteed himself. For this reason he earned extra money by entering Holy Orders and by reading horoscopes. Sir Isaac Newton (December 25, 1642–March 20, 1727) was intensely interested in astrology. He thought that some of the ancient dates in history might be rectified by means of astrology. He wrote a book entitled *Chronology,* in which he tries to do this. Some of his work here is extremely fine, but the fault of the book is that Newton did not differentiate sufficiently between history and myth.

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[8] *See* Index.

That astrology flourished in the eighteenth century, we must appreciate when we know that in the year 1786 no less than nine yearly almanacs were being published in London. Francis Moore, a physician who had been taught astrology (including medical astrology) by Dr. Partridge, published *Old Moore's Almanack,* which even today is probably a "best seller" in England. Its title sounds solid and substantial. The almanac first came out under the name of *Vox Stellarum,* or the Voice of the Stars, with the subtitle The Royal Almanack, but its real success came when it was re-named *Old Moore's.*

St. Germain made a big name for himself in the eighteenth century. Whether he was a great rogue or whether he was a sincere and genuine student of the occult, is a matter historians have never yet decided. Some people ascribe almost superhuman gifts to him. His real name may have been Joseph Balsamo, though this has been denied. He appeared in Versailles in 1743 and died toward the end of the century. Some people say he appears on earth from time to time, having discovered the elixir of life. If he was an astrologer no charts or books by him are recorded, though there are books by modern authors using the pseudonym of St. Germain. Dumas' novels give vivid pictures of his influence during the French Revolution.

Queen Anne, who reigned from 1702-1714, was the last English sovereign for whom Parliament made a grant to maintain a Court Intelligencer. The Court Intelligencer she chose was Von Galgebroh, a Dutchman who was remarkable for accuracy. He spent much of his time making charts for her numerous confinements and children. She had seventeen children, sixteen of whom died in infancy, and the survivor, Philip, died at the age of eleven. Von Galgebroh was asked by the queen about three years before she died if he would give her the date of her decease. He is said to have stated that August 1, 1714 would be a very difficult date for her to pass. On that day the queen died.

George I, who succeeded her, reigned from 1714-1727. He was estranged from his wife and practically imprisoned her in a castle. Her astrologer, Pard Zepl, became her only friend and confidant. He did not, however, give her any hope of ever regaining her freedom. He foretold to the day when George would die, and said that she would die one year and one day later, which came to pass.

The name of Alexander Pope (1688–1744) is inseparably connected with the days of Queen Anne, possibly from the lines:

Here thou, great Anna! whom three realms obey,
Dost sometimes counsel take,—and sometimes tea.[9]

which occur in his mock-heroic poem, *The Rape of the Lock,* written with a background of Rosicrucian concepts, which were evidently quite common at the time. In his Introductory letter to Mrs. Arabella Fermor, a lock of whose hair had been cut off by a noble gallant of the time, he says:

> The Rosicrucians are a people I must bring you acquainted with. The best account I know of them is in a French book called *Le Comte de Gabalis,* which both in its title and size is so like a novel, that many of the Fair Sex have read it for one by mistake. According to these gentlemen the Four Elements are inhabited by Spirits, which they call Sylphs, Gnomes, Nymphs and Salamanders. . . .

In the *Rape of the Lock,* Pope compares the four groups to the souls of departed coquettes, assigning them correctly to the elements of Earth, Air, Fire and Water:

But when the Fair in all their pride expire,
To their first Elements their Souls retire:
The Sprites of fiery Termagants in Flame
Mount up, and take a Salamander's name.

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[9] Pronounced then by everybody "tay."

Soft yielding minds to Water glide away,
And sip, with Nymphs, their elemental Tea.
The graver Prude sinks downward to a Gnome,
In search of mischief still on Earth to roam,
The light Coquettes as Sylphs aloft repair,
And sport and flutter in the fields of Air.

In 1786 Sibley and Browne collaborated and made a revision of Whalley's English translation of the *Quadripartite,* but even so, the result was not of the best. Ebenezer Sibley (1751–1800) was born in Edinburgh, Scotland. Apparently quite early in his astrological studies, he, like Partridge, delved into the *Primum Mobile* of Placidus de Titus, and was so delighted that all his succeeding textbooks reflect the Placidean methods. He felt that all astrologers ought to know of this book, and he and his brother Manoah (who was an excellent student of many languages) brought out in 1789 *A Collection of Thirty Notable Nativities by Placidus de Titus, Translated and Carefully Revised by M. Sibley.* This book was a very important contribution to English astrology. The principles it contained were developed in the nineteenth century when John Cooper in 1816 made a complete translation of the *Primum Mobile.* Through the Sibley brothers and through John Cooper the Placidean method of house division became established in England and in America. Sibley was also a great student of medical astrology, and took his M.D. when he was about forty years of age, in order that he might practise. After that, he edited Culpepper's *English Physician and Complete Herbal.* He wrote his *Medical Mirror,* also the *Keys to Physic and the Occult Sciences.* Others of his well-known books are *A New and Complete Illustration of the Celestial Science,* and *Uranoscope or the Pure Language of the Stars.* Sibley is said to have been a wonderful astrologer in his daily practice. He read, among others, the chart of the young poet Chatterton and correctly predicted all the major issues. He also taught him astrology free of charge and tried to help him out of his morbid habits, but to no avail. Chatterton was a precocious boy who had tried on many occasions to hoax all kinds of literary experts with manuscripts which he forged, and, having been found out on each occasion, he was sure that the world was against him. Sibley encouraged him to write poetry instead of making forgeries. As he learned astrology he put it into poetical form, to please himself:

> Mark where the Sun, our year completing, shines.
> First the bright Ram his languid ray improves;
> Next glaring wat'ry through the Bull he moves;
> The am'rous Twins admit his genial ray;
> Now burning through the Crab he takes his way;
> The Lion flaming, bears the solar power;
> The Virgin faints beneath the sultry shower.
> Now the just Balance weighs with equal force;
> The slimy Serpent swelters in his course;
> The sable Archer clouds his languid face;
> The Goat with tempest urges on his race;
> And in the Water his faint beams appear,
> And the cold Fishes end the circling year.

Reading this over, one can find no very illuminating idea or image. It is hardly good astrology. Comparing it with Edmund Spenser's verses on the signs, we cannot help noting how exactly correct Spenser's little vignettes are, revealing a poet who knew what he wanted to say and who had the ability to say it in poetical language. Chatterton was evidently more interested in writing a little poetry for his own amusement than in conveying real information in what he wrote. Of course he was only eighteen years of age when he committed suicide, but when people say he was a great genius, I think they exaggerate. His is typically the poetry of immaturity.

The eighteenth century brings us a number of notable authors who were interested in astrology,—Byron, Scott and Goethe. Among the painters there was Varley.

John Varley (August 17, 1778–November 17, 1842) made his name in art and was one of the founders of the Royal Society of Painters in Water Color, but his greatest hobby was astrology, and we have had few greater enthusiasts on the subject, or few men who could make as accurate predictions, or give as true an account of the innate characteristics of people. Uranus was discovered during his lifetime and Varley spent much time inserting Uranus in his own and other people's charts, watching carefully to see what kinds of events it provoked when it came into conjunction or aspect with other planets,—also when affected radically by other planets. He had evidently come to the conclusion that if Uranus was excited by Mars, there would be sudden or unexpected eruptions. One particular morning he announced to his family that he would stay at home, as something very serious was going to happen and he must be present when it occurred. At noon, part of the house caught on fire. Not one bucket of water did Varley carry, but he sat down to write notes on the effects of Uranus. Let me quote his son Albert, who tells the story:[10]

> He was so delighted at having discovered what the astrological significance of Uranus was, that he sat down while his house was burning, knowing though he did, that he was not insured for a penny, to write an account of his discovery. He had timed the catastrophe to a few minutes. . . . Although he lost everything in the fire, he regarded that as a small matter compared with his discovery of the new planet's potentiality.

In 1819 Varley was introduced by his friend Linnell to William Blake. As he always did when he met anyone for the first time, Varley asked Blake for the data for his horoscope. Blake at the time was anxious to know whether his talents were better suited to mural paintings or to engravings. After due consideration Varley told him that he would attain great fame through engravings. A great friendship grew up between the two men and Varley was immensely interested in all Blake's visions, asking if he could sit with him and ask questions. Varley would ask Blake[11] if he could see, for example, the man who made the Pyramid, or

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[10] *Life of John Varley*, by Alfred T. Story (Richard Bentley, 1894).

[11] *Life of Wiliam Blake*, by Gilchrist (John Lane).

Cleopatra, and soon Blake would be drawing what he saw. Blake maintained that he did not see these visions objectively in space. He always pointed his finger to his head and said, "I see them in here." In all, Blake made no less than fifty of these pictures for Varley. On one occasion Varley asked if Blake could obtain a vision of "the ghost of a flea." Blake drew a picture which looks like a flea-man, that is, the head and neck are human, but the lines on the face are such as a caricaturist might draw if he wished to caricature a man whom he considered to be somewhat flealike. Varley was particularly pleased with this, because at the time he was compiling a book which he called, *A Treatise on Zodiacal Physiognomy*; illustrated by Engravings of Heads and Features; and accompanied by Tables of the Risings and Settings of the Twelve Signs of the Zodiac; and containing also new and astrological explanations of some Remarkable Portions of Ancient Mythological History.

Varley planned to publish this book in four separate parts, but unfortunately, only the first section ever appeared. This deals with the first three signs, Aries, Taurus and Gemini. He used the "Fleaman" as one of his illustrations for Gemini, prevailing on Linnell to make the engraving. He probably offended all the Gemini people he knew, by inserting this. Varley states very definitely that physical appearance depends more on the sign ascending at birth than it does on the Sun sign, and for this reason he inserted tables of rising signs for those readers who knew the hour of their birth. On the whole, I think Varley was right, though I do find that some people look more like the sign in which the ruler of the Ascendant is placed, and there are various other factors which modify appearance. Varley speaks of the four main temperaments, and uses the types of Galen: phlegmatic, choleric, melancholic and sanguine, in other words, the types of the four elements. There is no record that Varley ever taught Blake any astrology. Probably Blake with his psychic tendencies would hardly be interested in the technique, but Varley did teach the great explorer Sir Richard Burton, who was the first Christian to enter the Holy City of Mecca, and he also taught Lord Lytton, who wrote the occult novel, *Zanoni.*

Byron (1788-1824) was quite a good astrologer. He set up his own son's chart and quite accurately predicted the main events of the latter's life. He wrote, in *Childe Harold's Pilgrimage* (Canto 3, LXXXVIII):

> Ye stars that are the poetry of heaven,
> If in your bright leaves we would read the fate
> Of men and empires—'tis to be forgiven,
> That in our aspirations to be great,
> Our destinies o'erleap their mortal state,
> And claim a kindred with you; for ye are
> A beauty and a mystery, and create
> In us such love, and reverence from afar,
> That fortune, fame, power, life, have named themselves a star.

We must not forget that Byron wrote a play entitled *Sardanapalus,* in which he bases the plot on the betrayal of the king by the astrologer Beleses (Belysys). In Act 2, Scene 1, he makes Beleses say:

> The sun goes down: methinks he sets more slowly,
> Taking his last look of Assyria's empire.
> How red he glares among those deepening clouds,
> Like the blood he predicts! If not in vain,
> Thou sun that sinkest, and ye stars which rise,
> I have outwatched ye, reading ray by ray
> The edicts of your orbs, which make Time tremble
> For what he brings the nations, 'tis the furthest
> Hour of Assyria's years . . . while I speak he sinks—
> Is gone—and leaves his beauty, not his knowledge,
> To the delighted West, which revels in
> Its hues of dying glory. Yet what is
> Death, so it be but glorious? 'Tis a sunset;
> And mortals may be happy to resemble
> The gods but in decay.

Although Sir Walter Scott (1771–1832) wrote one of the most fascinating novels about an astrologer, it would not appear that he had more than an antiquarian interest in astrology. It seems that when he wrote *Guy Mannering* he originally intended to write a romance in which the star positions should bear out the lives of his characters, but he found the idea too difficult. In the Introduction to the novel, he remarks: "It occurred to me that to do justice to such a subject would have required, not only more talent than the author would be conscious of possessing, but also, involved doctrines and discussions of a nature too serious for his purpose and for the character of the narrative." It would appear to me that such a novel as Scott first thought he might write could only be made a reality by depicting historical persons and making actual horoscopes, and then, as he says, in order to make the astrological action intelligible to the reader, one would have to appeal either to a limited astrological public, or take too much time from the plot to explain matters.

Goethe (1749-1832) was always interested in the old folklore, myths and legends of early days, and in many other phases of research, including both astrology and alchemy. These studies were due to the early influence of his mother:[12]

> Together they read Paracelsus, investigated the Kabbalah, studied alchemy and astrology, and every fascinating subject which can help to render clearer the strange problem of our existence in the visible world and our connection with the invisible. The physician and the surgeon who attended the delicate boy were absorbed in the same researches, and mingled in the counsels of Frau Goethe. . . . The physician had not studied Paracelsus in vain. It was currently whispered in the outer circles, and frankly acknowledged in the sacred one to which the privileged few belonged, that nature held the secret of a universal medicine, which the physician had discovered. He did not dare to make use of it, for such things were forbidden in the practice of the day; but it was hinted that on rare occasions and in great emergencies he had ventured to apply his occult knowledge with the most

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[12] *Goethe's Faust,* by Mary Hanford Ford (Chicago, 1897).

marvellous results. Goethe relates an incident of how this treasured science was demonstrated, on one occasion, for his own benefit. He was suffering from an acute attack of indigestion, which refused to yield to the ordinary remedies, and threatened to result fatally. His mother and the physician were at his bedside, and the mother, distracted over the danger to her beloved son, insisted that the physician should, in this case, bring forth his hidden resources and make use of the forbidden medicine. In the dead of night, therefore, the mysterious remedy was prepared and administered, and gave immediate relief, so that the patient fell into a gentle slumber and wakened restored to health.

Shelley was not an astrologer in any technical sense, but he was an excellent Greek scholar and evidently had come to the conclusion that there was some inner meaning in the plays of Aeschylus. Brooding over *Prometheus Bound,* Shelley conceived the interesting idea that Prometheus was a symbol of a coming precessional cycle in the heavens, and personified a hero who would displace the mighty Jupiter, ruler of the sign Sagittarius. In thinking this out Shelley decided to write a play to be called *Prometheus Unbound*. The Greek stories of the deaths of Uranus and Saturn are really studies of previous precessional ages. Uranus is now the ruler of Aquarius. He was called the "guardian" of Aquarius by the Greeks. He was slain by Saturn, ruler of the next precessional cycle of Capricorn. Finally, Jupiter slew his father, Saturn.

Shelley's story, therefore, symbolizes the overthrow of Jupiter by the Lord of Scorpio. In order to understand the astrological significance of *Prometheus Unbound,* we must consider the hero to be Lord of this sign. If I am correct in my surmises on this matter of precessional ages, then the knowledge concerning precession, must be thousands of years older than we have suspected, for the change of sign can only occur after 2,160 years. Prometheus, in his desire to help mankind, is fabled to have originally stolen the sacred fire from heaven, which he hid in a fennel stalk and brought to earth. For this theft he was chained by Jupiter to a pillar on a lofty mountain and eternally Jupiter's eagle came and tore at his liver. Shelley opens his play at the time when Prometheus has lost all desire for revenge on Jupiter. He even repents of the terrible curse he had hurled against the latter. Jove's messenger Mercury enters with a peace offer, but Prometheus refuses this, not because he does not believe in peace, but because he realizes that the rule of Jupiter is effete and worthless, and he (Prometheus) cannot compromise with what is worthless. He must become the leader of the new and changing world. In the third act, while Jupiter is boasting of his never-ending rule, Demorgorgon comes and cuts his thread of destiny, and he is dethroned. Demogorgon declares:

> Promethus shall arise
> Henceforth, the Sun of this rejoicing world.

At first, the world is disappointed that the change does not give instantaneous happiness to mankind, but then, as the Spirit of the Air looks into the future, she sees that a new order is at hand, and the Spirit of the Earth chants her great prophecy of the conquest of the elements by man, while Demogorgon gives the clues to the secret whereby man shall "Reassume an empire o'er the disentangled doom." He must learn:

> To suffer woes which Hope thinks infinite;
> To forgive wrongs darker than death or night;
> To defy Power, which seems omnipotent;
> To love and bear; to hope till Hope creates
> From its own wreck the thing it contemplates.

Chapter 22

ASTROLOGERS OF THE NINETEENTH AND TWENTIETH CENTURIES

> *Fate is a name for facts, not yet passed under the fire of thought; for causes which are unpenetrated. But every jet of chaos which threatens to exterminate us is convertible by intellect into wholesome force. Fate is unpenetrated causes.*
>
> EMERSON, *"Essay on Fate."*

PEOPLE often ask me whether the discoveries of Uranus, Neptune and Pluto did not upset the integration of the horoscope so vitally that we must either admit all ancient astrologers to have been wrong, or that modern astrology is wrong in using these new planets. I would reply that these new planets do not "upset" astrology any more than the change from a one-cylinder-engine to an eight-cylinder-engine "upset" the automobile industry,—or to use another simile,—any more than the finding upon the earth of new metals previously indicated in the spectrum "upsets" the science of metallurgy. If the spectrum changed, it would "upset" matters, but the finding of new metals merely leads metallurgists to readjust their current stock of knowledge.

As a matter of fact, astrologers have always expected that new planets would be found. To give a concrete instance,—Pluto was discovered in the year 1930. In the Belgian magazine *Demain*[1] for April 1938, we read:

> We extract from the *Manual of Spherical Astrology* by Formalhaut, published by Vigot Brothers at Paris in 1897, the following line from page 316:
>
> "A planet exists beyond Neptune.
> It will be called Pluto."

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[1] *Demain,* edited by Gustave L. Brahy, Brussels.

And Formalhaut goes on to state that after Pluto, two more new planets will have to be discovered!

Giving the correct name to a planet undiscovered till thirty-three years later, was evidently psychic, but not so the fact that new planets will have to be discovered. This indeed has been known for ages, that in order to complete our twelve planetary rulerships, we still need two more planets, counting the Sun and Moon as planets for our own purposes. Contrary to popular belief, the planetary scheme is not haphazard or invertebrate in its assignment of rulership of signs, nor in its assignment of exaltations, and it is from a schematic consideration not only of sign rulers, but of planets in exaltation too, as they are placed in the natural chart, that astrologers have realized that two more planets would need to be discovered in order to complete a certain specific unity. It is this latter geometrical scheme which I would compare with the unvarying spectrum. The matter looks simple,—just twelve signs and twelve planets, say our critics. Actually, the matter is somewhat too involved and too technical to explain here.

I suppose that what I have just said will make some critics argue that if we need twelve rulers our present astrology is faulty. I would reply that it is not faulty so much as incomplete, in the same sense that metallurgy is incomplete. The metallurgist knows that he has to find more metals. As he does discover new ones, he learns their use, and sometimes in the light of this, he has to modify his previous concepts of the relative value of the older known ones. Nevertheless, certain facts and [illegible] are always fundamental. Now, there are certain fundamentals in astrology, also, which cannot change, but the present or past number of the planets is not one of them. The definite application and assignment of characteristics and substances to these new planets has only been worked out during long years of continuous observation on the part of astrologers. (We have already seen how Varley worked on Uranus.) The steady research on Uranus and Neptune occupied the attention of astrologers all through the nineteenth century, and their findings have enabled us to give more comprehensive and adequate readings, just as a modern orchestra gives finer renditions than a fife and drum band. There is another factor. The nineteenth century brought in a whole new series of inventions that are definitely Uranian and Neptunian, but previous ages would not feel so much the lack of these two planets in their readings. Research on Pluto still goes on. My own finding on this is that it rules "change," a change that marks the end of an old condition and the beginning of a new. The changes brought about by Pluto, however, are not the sudden dynamic changes such as are brought about by Uranus. In fact, they are often unappreciable for a long period, but they are nevertheless definite ones.

The nineteenth century gave us a long line of "Raphaels" and "Zadkiels." Among the "Raphaels" were Robert C. Smith born March 3, 1795, John Palmer born May 28, 1802, Mr. Wakeley born May 10, 1814, and R. W. Cross born May 15, 1850. The most illustrious of the "Zadkiels" were Commander Richard James Morrison born June 15, 1793, and Alfred J. Pearce born November 10, 1840, son of Doctor C. T. Pearce born August 11, 1815, also a fine astrologer.

If the seraphic titles of the nineteenth century astrologers irritate some people, these men had at least the same right to take upon themselves pseudonymns or any name they chose, as have actors and writers to use whatever name they please, or as some of the mediaeval scholars had to use such titles as Angelic Doctor, Seraphic Doctor or Subtle Doctor, or as Philippus Aureolus Theophrastus Bombastus von Hohenheim had to call himself merely Paracelsus.

The first Zadkiel, Commander R. J. Morrison, was very successful in predicting earthquakes from his knowledge of astrology. In the *Zadkiel Almanack* for 1853 (which was published, as most almanacs are, in the summer or fall previous to the year which bears the date) he made mention of the total eclipse of June 6, 1853, and among the predictions of probabilities which he deduced from the position of that eclipse, we find:

> As Mars and Saturn are in Taurus in the precedent angle of the eclipse at Panama, I have no doubt there will be a fearful amount of earthquakes there and also about the isthmus of Darien, the shocks extending to Carthagena, along the northern coast of South America, to Honduras and California, Florida, etc., and the West Indies. These events may be looked for in July, 1853, about the 16th day.

This was quite a bold and definite prediction. On the sixteenth day of July 1853, there was a terrific earthquake at Cumana on the Spanish Main.

Commander Morrison was the Zadkiel who published a new edition of Lilly's *Introduction to Astrology,* as we have noted previously. In his own *Grammar of Astrology* he incorporated various tables for calculating nativities, and instructions in Primary directions. He also wrote a *Handbook of Astrology,* in two volumes. Before he published *Zadkiel's Almanack* he brought out a periodical named *Horoscope,* which, however, was soon discontinued.

Alfred J. Pearce (born Nov. 10, 1840) was editor of *Zadkiel's Almanack,* of *Starlore* and of *The Future.* His textbook on astrology is still a standard textbook for all advanced students. Possibly Pearce's book and Simmonite's *Complete Arcana* are the outstanding advanced textbooks on the subject. John Story, in his Introduction to a reprint of the *Arcana,* wrote as follows:

> Dr. Simmonite was the master of astrology in his day. . . . The book will ever stand in the first rank with all students of astrological lore. Generations shall pass away, and the centuries roll on, but this work shall endure and remain; remain as a preacher of laws, as a teacher of truth, and as an evidence of the power of times and seasons.

The first Raphael, Robert C. Smith (1795-1832), edited *The Straggling Astrologer,* an annual which had a large sale. He influenced one of the first women astrologers to go into print,—Olive, Princess of Cumberland. She wrote on the effects of the Jupiter-Saturn conjunctions in previous eras of world history. Raphael's best known venture, *Raphael's Almanack and Pro-*

phetic Messenger, made its first appearance in 1820, and it continues to the present day. His *Manual of Astrology* has been reprinted frequently ever since it was first published in 1828. By the time Raphael VI was the editor, astrology was well developed in America under Dr. L. D. Broughton and W. H. Chaney, and we come to the stormy fights between Chaney and "Jim" Cross, which we shall speak of later.

Then there was Zuriel (John Wheeler), who wrote *Lectures on the Science of Celestial Philosophy* in 1835. Among other things he deals at great length with the Jupiter-Saturn conjunction which would establish itself in the earth trigon in 1842. This was the conjunction that reveals to astrologers the major conditions of the world for the following 240 years, that is, until 2080 A.D. Zuriel spoke of vast changes that would be brought about in warfare during this period, due to the fact that Uranus, planet of invention, was conjunct Mars the planet of war. He said that new weapons would be invented which would be entirely different from any known in his day. He also said that the government of India was due for radical changes all through this 240-year period. On both these matters, Zuriel, thus far, has been entirely right.

He also gave illustrations of how these conjunctions work out in the history of buildings that have stood for centuries. Again he refers to the Jupiter-Saturn conjunction of 1802 as having made a conjunction with Mars, in Napoleon's chart, thereby proving to the astrologers of 1802 that Napoleon's power would not last through the twenty-year cycle inaugurated in 1802. I think this is an important matter, showing that if an individual's chart does not harmonize with world cycles, his power is broken in the cycle, though not necessarily at the inception of the cycle. The actual time would more readily be derived from the individual's own horoscope.

Raphael VI, R. W. Cross, was born May 15, 1850. He says in one of his books that he started to learn astrology when he was twelve years of age, and that when he was eighteen he met the astrologer Merlinus, who was the editor of an almanac called

The Astrologer of the Nineteenth Century. They were good friends for two years, till Merlinus died. Cross became editor of *Raphael's* on his twenty-fifth birthday.

Neptune, or R. H. Penny, was one who viewed with alarm the possibility of terrific wars during the twentieth century. In a letter which he wrote to *Modern Astrology* in 1901, he states that the fault of the nations is that they did not endorse the Great Universal Peace Plan proposed by the Czar of Russia, and openly said it would not be many years before the world would live to regret this non-endorsement. How right he has been!

In the middle of the century two American astrologers came to the front, Doctor L. D. Broughton and W. H. Chaney, the latter a student of the former. Len D. Broughton (April 28, 1828–September 22, 1899) was a descendant of a long line of doctors who were also astrologers. His *Manual of Astrology* (1898) is also the story of his life and provides an interesting commentary on the bigotry that existed in New York in his time. He tells how mobs of violent people stormed his house merely because he thought that human destiny was shown by the stars. He gives some very valuable information on preceding astrologers, and a list of the astrological books in his library. He speaks of Worsdale's prediction, made eleven years before the Battle of Waterloo, to the effect that if ever Napoleon and Wellington met on the field of battle, Napoleon would be defeated. Broughton also gives an account of American astrology and astrological publications. He says:

> When I published Broughton's *Monthly Planet Reader and Astrological Journal* forty years ago, it was the only monthly periodical of its kind in the world, or at least in the English language . . . and probably at that period there were not twenty persons that knew enough of astrology to be able to erect a horoscope, and they were all either French, English or German. . . . At the present time there are many thousand American people who are studying astrology. . . . The *Prognostic Star Gazer,* published in Boston, Massachusetts, also the *Dreamer,* published in the Western States, are both inclined towards

> astrology. The New York *Sunday Mercury* has devoted a column every week, for years, to astrology. The New York *Waverly* devotes two columns every week, and the Elmira *Tidings* also devotes a column a week. . . . My brothers, Matthew and Mark, were expert mathematicians and skilled astrologists; they came to America a few years before I did, and both practised astrology in Philadelphia. My brother Mark published a monthly periodical for years, called *The Horoscope;* also an astrological ephemeris.[2]

Broughton also refers to the fact that Joseph G. Dalton had started to publish ephemerides in America, and that he had sometime previously brought out the best Table of Houses. "Mr. Dalton," he says, "is one of the most learned mathematicians in the United States."

Among Broughton's pupils was W. H. Chaney, a fine mathematician, who had been a governmental surveyor, editor of various newspapers, a lawyer and district attorney in Iowa and also in Maine. When he became proficient in astrology he wrote his *Primer,* and other books, laying great stress on Primary Directions. Like Broughton, his books are filled with episodes from his own life. It appears that when he was in New York, he was arrested on what he, as a lawyer, termed an unjust charge, and spent six months in prison, bail being refused. Chaney in one of his books makes some very acid remarks on the Boss Tweed administration of the time. However, he decided to leave New York for good when he was free. He spent the last years of his life revising and correcting Holdsworth's *Ephemerides* of 1800-1850, and then continuing with planetary positions up to 1877. Broughton gives some idea of the labor which Chaney expended on this, and also of what Holdsworth originally went through. He says, "No one who does not understand astrology and mathematical astronomy, can have any idea of the amount of labor it took to calculate back for fifty or a hundred years, the longitude, latitude and declination of the Moon, Mercury, Venus, Mars, Jupiter, Saturn and the planet

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[2] Len D. Broughton, *Manual of Astrology* (1898).

Uranus, to the degree and minute for each day in the year; also the longitude, declination and right ascension of the Sun, in degrees and minutes for each day for that length of time. Mr. Holdsworth in some of his calculations had Mr. W. J. Simmonite, who had an academy in Sheffield, England, to assist him. Mr. Simmonite was the most learned and gentlemanly astrologer that England ever knew. He wrote, spoke and taught eight different languages; besides being a thorough scholar and mathematician."

As I understand the matter, Holdsworth's *Ephemerides* were based on White's *Ephemerides,* which ran from 1800-1856. These, together with Raphael's, and some of Parker's, were the main sources for planetary positions in the first half of the nineteenth century. Orion's *Almanac* also carried ephemerides, as did Zadkiel's, but these two almanacs are now incorporated in Raphael's.

Chaney had a great respect for Zadkiel (Commander Morrison), but none for any of the Raphaels, nor for Olney Richmond, nor for Frederick White. Most of the astrologers I have known, however, speak in terms of very great respect of Frederick White, who died in 1940. Other pet aversions of Chaney were people who wrote on Solar Biology and people who used Heliocentric positions of the planets.

Among Dr. Broughton's students in New York City was Catherine V. Thompson (born April 10, 1858), who later became the foremost astrologer of Boston, able to command a whole page of a Boston newspaper whenever she felt she had some important astrological message on the affairs of the world. Her most valuable contribution to astrology was a magazine entitled *The Sphinx.* It was from Catherine Thompson in Boston that Evangeline Adams (1865–1932) took many lessons in astrology, though Dr. J. Heber Smith was also one of her tutors and a great inspiration in her work. Dr. Smith used astrology in his prison work. A man with broad basic sympathies for his fellow-man in unfortunate circumstances, he astrologized each inmate he treated, striving to find out the basic emotional problem at the root of the crime he had committed. Astrology lends itself readily to this work, for the pattern of a man's emotional complexes is revealed without the endless questioning that the modern psychiatrist, psycho-analyst and psychologist has to make, unless he, like Jung, is also an astrologer. Evangeline Adams was not only an exponent of astrology but of palmistry, and in giving her readings she would often, at the close, look for a moment at her client's hands. After all, are we not part of a great unity in which each separate part is valuable in estimating the whole? I have met, at various times, many hundreds of Evangeline's clients, and find that more than ninety per cent of them still speak of her with gratitude and admiration. Apparently she solved some problem that was troubling them very deeply. That she did not please all is something that everyone who has ever lived has had to face. Some even criticized her for charging for her services, but Evangeline Adams left no fortune and always lived economically. If, with her splendid mentality and business capacity, she had worked in almost any other business or profession, she would have made much more money.

Not so well known by the general public, but an astrologer of commanding proportions in America, was John Hazelrigg, who died at an advanced age in 1941. One might call him the Astrologers' Astrologer. He discovered many interesting factors concerning the Jupiter-Saturn Conjunctions, and other planetary cycles, especially as they have affected, and will affect, the United States in particular. In the early days of the twentieth century he wrote foretelling that the passage of Uranus through the sign Gemini (1940-1949), would coincide with a major war and with great economic upheavals. Broughton also foretold this.

Alan Leo (1860–1917) was brought up in a Scottish Calvinistic family. Later, he studied both astrology and theosophy. His textbooks on astrology reflect his theosophical interests, a matter which apparently irritates certain astrologers who do not believe in theosophy. As one reads his books one is reminded of the Neo-Platonic theories on "Emanations." However, Alan Leo was a very profound astrologer and mathematician, who travelled all over the world, to India and to China, to confer with astrologers of various systems. His "six big" books are still standard authorities on all matters pertaining to astrological mathematics and to the technique of interpretation. The "six big" books include *Astrology for All, Casting the Horoscope, The Progressed Horoscope, The Key to Your Own Nativity, How to Judge a Nativity,* and *The Art of Synthesis.* Besides these, he wrote *Esoteric Astrology,* and also about twenty smaller manuals, all of which are valuable. Alan Leo was a very lovable personality who had the gift of drawing all kinds of people around him, and among these many of very high intellectual calibre, who were prepared to study astrology, which meant that they took up all phases of higher mathematics, spherical geometry and astronomy, in order that they might understand thoroughly what they were actually doing when they made horoscopes. Through Alan Leo's work, and that of his friends and followers, a very definite revival of interest took place, with ever-widening circles of devotees, among them some of the best brains in the country. His wife, Bessie Leo, was associated with him in his work. His sub-editor, Aphorel, was largely responsible for all the labor entailed in tabulating and editing the *Thousand and One Notable Nativities.* Alan Leo died brokenhearted over a law-suit that was brought against him.

Sepharial, Walter Gornold (1864-1930), was definitely opposed to the mixing of theosophical and astrological doctrines, and always stated that he was a Christian, and that he saw no reason for astrology not being associated with Christian concepts. He was a most prolific writer, and an astronomer as well as an astrologer. At one time he was a member of the Royal Astronomical Society, having been introduced to that body by H. M. Christie, then the astronomer-royal, but later Sepharial was asked to resign for using the letters F.R.A.S. in his astrological advertising. He resigned but reminded the members of what the society owed to its early astrological members. Camille Flammarion then sponsored his membership in the Société Astronomique de France. Sepharial was also a member of the Astronomical Society of Great Britain, continuing in this membership until his death. Some of Sepharial's predictions are very well known. When the date of the coronation of Edward VII was announced, Sepharial drew a horoscope and announced that the coronation would have to be postponed. It was postponed because of the illness of Edward. He also prophesied the last war and he further prophesied various labor strikes. I might also mention that *Raphael's Almanac,* too, predicted the last war. Now, *Raphael's Almanac* is on sale in the August preceding the year for which predictions are made, and these predictions are usually compiled during the early months of a year. Thus the 1914 *Almanac,* which carries the predictions of war, was made in early 1914. The 1915 *Almanac* was on sale before the British declared war in early August 1914, and yet the *Almanac* carried predictions of war.

I have sometimes seen it stated that Flammarion was an astrologer. This, I think, is an overstatement. Flammarion was intensely interested in psychic phenomena, writing many books on this subject, and he was interested in all phases of prediction. He had several astrological friends, but he was not an astrologer. He wrote a Preface to Ely Star's *Les Mystères de l'Horoscope* (1887) in which he says astronomers do not any longer believe in judicial or in kabbalistic astrology. Astrology was originally based on a concept that man was the supreme object of creation, and created in the image of God,—a matter which he personally believes,—but since astronomers have found out that our earth and our whole planetary system is just a speck in the midst of millions of planetary systems, it is increasingly difficult for astronomers to continue believing in planetary influence on human beings. The qualities necessary for astrologers, he observes, would have to be increasingly great, to allow for the vastness of the universe. On the other hand, he says, although man has always had a very high opinion of himself and of his intellectual powers, the fact remains that out of a million people, nine hundred and ninety thousand spend their time on beefsteaks, wine or beer, fighting, gambling, politics, etc., and few indeed of the remaining thousand spend their time thinking of the vast problems of human destiny, therefore anyone who can draw men away from their low interests to meditate on the immense problems of life, is rendering a great service to mankind, and for this reason he wishes the greatest success to Ely Star's book, and ends by saying that if he were an astrologer, he would want to predict success for it.

A. G. Trent was the pseudonym of Dr. Richard Garnett (born 1835), who was on the staff of the British Museum. Being interested in astrology, he delved considerably into the tremendous stores of astrological books at the Museum and gave out a great number of old charts. He contributed in 1884 to the *University Magazine,* and in 1894 some of his material was collected into a book called *The Soul and the Stars.* In this book Dr. Garnett stated that the people still need to be taught to regard astrology as a definitely empirical science, because the public has been told for so many years to regard the astrologer as a kind of wizard. He thought the best way to offset this wrong opinion that there was something "occult" about astrology, was to compile statistical data, and he himself proceeded to show how he had compiled some of this material on the planet Mercury and its relationship both to mental ability and to mental instability. In spite of his very sound advice, no statistical group of any consequence was formed in England during his lifetime, and in fact none was formed in France until Paul Choisnard, a French engineer (born Feb. 13, 1857), led the way. To Choisnard, more than to anyone else, the present French and European statistical groups owe their being. He found that there was a definite idea that St. Thomas Aquinas was opposed to astrology, hence one of his first tasks was to find out what St. Thomas actually did say. He found that St. Thomas opposed fatalism, but not an astrology that allowed free will. Choisnard agreed with St. Thomas, saying that he (Choisnard), as an engineer, knew that nothing in this world is one hundred per cent certain, but that by using statistics astrologers could find percentages of cases wherein matters would work out as the old astrologers had demonstrated. Hence, he said we should find out what these percentages are. One of his first researches was on heredity. Astrologers say that the birthchart of a child has resemblances to that of a parent, so Choisnard collected several thousand parents' and children's charts and tabulated the resemblances under different headings,—planets in the same sign, planets in the same houses, aspects between planets, etc. From the result he deduced his law that a child is born on the day in the year when the heavens are most similar to the heavens at the birth of the father. Choisnard then went on to state what astrologers could do almost with certainty (if they really were astrologers and not pretenders to the art), and what they could not do. He said that an astrologer might find some difficulty in estimating how famous a person would become, but that if seven charts were given to an astrologer, with the statement that all seven were members of a particular profession, and six were of mediocre standing while the seventh was famous, the astrologer would have little or no difficulty in picking out the chart of the famous one. Altogether Choisnard wrote about twenty books to prove his contentions. Probably the most popular is *L'Influence Astrale et les Probabilités*. Choisnard attracted to himself a very large number of other engineers and also of doctors, so that even after his death the work of compiling statistics still went on. Many American astrologers, too, have worked in this statistical way, and the results have done much to determine whether the ancient astrological rules are right or not. In most cases the percentages have been in favor of the old rules, and while there have been some cases in which statistics have contradicted old rules, it does not prove that the whole science is wrong, but only that a few rules were made without sufficient evidence. In any case, a clarification of rules has been inaugurated which can only lead to greater confidence.

In his researches Choisnard "discovered" that nearly all the old masters read the future in the light of the character of the individual. In fact the phrase "Character is destiny" is an astrological phrase. He reminded his followers that the old astrologers always regarded aspects from two points of view:

(1) Celestial aspects—that is, aspects conceived as existing between planets in one heavenly *sign* of the zodiac and planets in another heavenly *sign*.

(2) Terrestial aspects—that is, those conceived as existing between planets in one particular *house* of the horoscope and planets in another *house* of the horoscope.

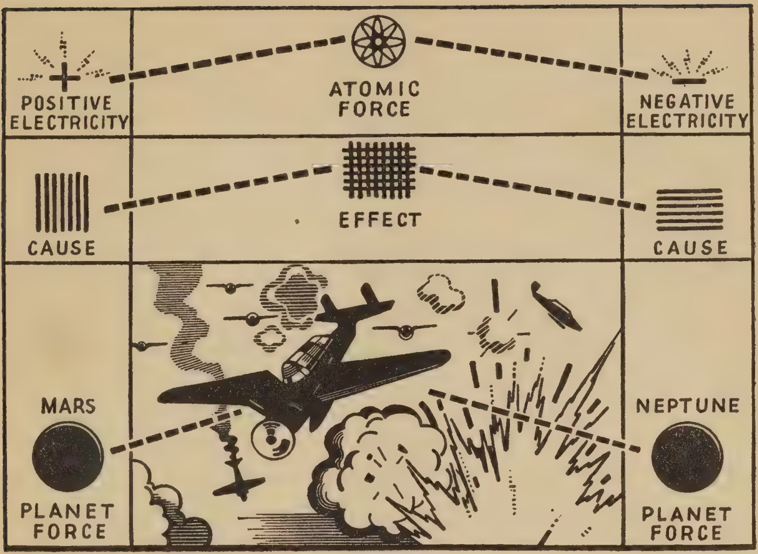
The celestial aspects are those which relate to character (among other things). For example, let us take Mercury in the sign Aries trine Mars in the sign Sagittarius. With regard to character this would make for a very outspoken, dynamic person with mechanical ingenuity and some love of travel. But whether the person will become an engineer or not will depend on the terrestial estate of the aspect. In fact, he might not be an engineer at all. He could be a surgeon or a fighting parson. The same mental aggressiveness would be used in all these three professions. The astrologer would have to look at the "terrestial estate" of the aspect, and note in what houses it occurs in order to make his decision. The specific profession then is conditioned by the time factor of birth. In any case, when deciding upon a profession the astrologer has to read the whole chart. He has to find out if the parents will co-operate in helping the child, whether they have the money for a university training, whether the child himself will be able to make money at the work he likes, or whether he might not do this work as a hobby, and earn his money in some other way. No one can say definitely from just one aspect in a chart what the profession is. Astrology is a very complex subject when properly studied. It is as complex as life itself.

At the European Convention of Astrologers (Paris, 1937), one doctor presented copious statistics on mental disorders, but in making his comments on the horoscopes of these cases, he said that no one could take the horoscope of a new-born child, and seeing the aspects, say definitely that the child would go insane. But he added, if insanity had set in, then he could diagnose from the horoscope the particular form in which that insanity would express itself. I think all these clear-cut statements of what a horoscope can show and what it cannot show, are most important.

I gathered that the European statistical groups were not particularly interested in making predictions. Not that they did not think prediction feasible, but that they felt their own particular work lay along statistical lines, such as would enable them to formulate laws and statements which in time would make the predictive art a more certain one.

Of course, many of the matters they are working on have been known to astrologers from time immemorial. However, when the followers of Choisnard tabulate thousands of cases and compile their data, then astrology becomes "scientific." If one asks me what of the future of astrology, I would say that, with all this research, there is no reason why astrology in time should not be recognized as a very fine empirical science. I note some of our critics still laugh at the idea of astrology being scientific,—but is there any more scientific way of investigating astrology than that conceived by Choisnard? Astrologers do all their research without money grants, and always in their spare time, and under most severe criticism. Our critics when they start "investigating" have not enough foundation for such work. I know merely enough about electricity to press a button when I want to "investigate" if a new toaster is rightly constructed. I know merely enough about a telephone to lift the receiver if I want to "investigate" whether my telephone is working correctly. But I should be laughed at if I asked for an assignment to investigate the equipment. "Investigators" of astrology have usually as much knowledge about astrology as I have about the construction of a telephone. Their usual grandiose statement is, "You tell me . . ., and I'll know if astrology is a fake or not." It is tragic but true. The only way to find out if astrology is true or not is to take a few years of your life and study it. What is the use of arguing that some dear old somebody in the past,—Dean Swift,—or anybody else,—wrote against astrology? What did he know about it? Personal opinions have to stand the test of scientific facts. Choisnard paved the way for astrology to be presented in the same scientific manner used for any other empirical science. Needless to say, the amount of work still to be tackled is truly enormous, but in time, as births are recorded more accurately, the numberless students who are delving into astrology and working sincerely, will present the world with more and more definite proofs, that among the thousands of charts they have studied, there is justification for saying that astrology is, and ever was, a real science.

To my mind, most people who call themselves scientists are rather tabulators, accountants and bookkeepers of their subject,—custodians and librarians of what greater minds have discovered. It is, and ever will be so, in astrology too. But let us never forget that astrology is an art, and the work of art is to inspire and to create vision. Just as a great artist-architect looks at a plot of ground and envisions a noble structure there, and then proceeds to construct plans as to how to make it real,—or as a gardener looks at a plot of ground and sees how a garden fit for the gods can be made there, so should an astrologer look at a chart, and awaken vision in his client of what is there, and what can be made of the qualities, potentialities and powers that are innate in the mind and soul of the client. Only when vision and imagination come into play can life and circumstances be adjusted and grow into something that is beautiful and radiant.


POSITIVE ELECTRICITY
ATOMIC FORCE
NEGATIVE ELECTRICITY
CAUSE
EFFECT
CAUSE
MARS
NEPTUNE
PLANET FORCE
PLANET FORCE

EXPLORING TIME WITH ASTROLOGY

Astrology is, so to speak, a first knocking at the Door of the Inscrutable.

Sepharial

The reason why I am an astrologer is because I believe in the Pragmatic Doctrine of, "Try it, for it works!" My own concept of Astrology is that it is the exploration of Time, or the effort to obtain the content of any given moment,—for one moment in time has not the same potentiality as another.

I plan in this chapter to demonstrate that Astrology does work, and that it reveals what is apparently locked within Time. After due consideration I have decided to present my proofs through the medium of Mundane Astrology rather than through the medium of Personal Astrology, because for some reason, which I will allow my readers to fathom for themselves, countries act with less free will than individuals, so that the influence of the stars on nations,—or the coincidence of difficult planetary positions with the affairs of nations,—is more obvious and more irrefutable. A man may deny he fought with his wife, but a nation cannot deny that a war has taken place. Practically everything in this chapter was predicted in advance of its happening. Practically everything has been a subject of discussion in my astrological classes, months and years even ahead of its unfolding in time. There is no necessity for any of my readers to believe this. I merely ask you to note the coincidence of events with astronomical factors related to geographical longitudes and areas, as interpreted by an astrologer.

Since the action of Mars is always very apparent, I think it wise to present first all the Mars-Saturn Conjunctions since 1934. These two planets conjunct, or move into the same degree of longitude, about every two years. If there is going to be a war, charts set up for these conjunctions reveal where the war will happen. But,—and this is most important,—it is peoples and rulers, not planets, who make wars. Therefore when I, as an astrologer, look ahead and note where the destructive force of these conjunctions will hover, I do not predict a war unless the chart of a ruler of a country, or the chart of some country itself also predicates war.

The fact that every Mars-Saturn Conjunction does not bring war somewhere is due to wisdom on the part of rulers,—even if wisdom sometimes sinks so low as to become little more than selfish diplomacy.

Everyone knows Mars is the war planet, but not everyone knows that Saturn is the planet of government. So, since wars are necessarily fights organized by governments, we have to take particular cognizance of these two planets when predicting wars. We first note the sign in which they make their longitudinal alignment. Ptolemy and others plotted out the astrological signs for the nations known at that time, and so far I see no reason to say they were wrong in their assignments. Russia and Ethiopia were assigned to Aquarius. Consequently, when Mars and Saturn conjuncted in Aquarius on January 17, 1934, it seemed logical to think of these two countries. But who was interested in Ethiopia then? Who cared if it did have a war? What had that to do with us? Our indifference led to a war of conquest there, with terrific repercussions since. Wars do not as a rule break out immediately the conjunction takes place. It will depend on the rest of the chart. Certain planets have to take their established time to move into danger zones, before any first shot is fired. The war against Ethiopia broke out October 3, 1935. On the latter date Mars, the war lord, had moved into 12 degrees Sagittarius, into the danger zone of an exact square of 12 degrees Virgo,—the position of Neptune in the 1934 Mars-Saturn Conjunction horoscope. Any astrological textbook will tell you that a square, conjunction, or opposition of planets, will bring matters to a head. They are aspects of action.

But, you ask, why didn't Russia have a war between 1934 and 1936? You will note in the two charts that we set up in our Appendix I, that the placement of planets is different in different parts of the world. Russia had plenty of internal trouble but no war. However, an anti-Comintern Pact was signed against her by Italy, Germany and Japan. That this pact could not last was most apparent as soon as a horoscope was drawn up for its date and time. The Third House rules signatures, and there was posited a retrograding Saturn in opposition to the tricky Neptune. Somebody would slide out! The pact weakened when an eclipse hit the fourth cusp,—the cusp of the house of endings. It collapsed when Mars came to the square.

The next Mars-Saturn Conjunction was on January 25, 1936. Both planets lay in opposition to Neptune, a very dangerous position, for Neptune's wiliness always involves more people and conditions than are immediately apparent. In setting up charts to see where this opposition would lie, I found that Mars-Saturn lay at the Nadir of a chart drawn for about 28 degrees west longitude, that is, in the Atlantic Ocean, but Neptune hovered over about 20 degrees west,—near the Canary Islands. I had always thought of the Canary Islands as constituting a charming winter resort for elderly invalids, so unfortunately, paid little attention to this chart. I set up another chart for Madrid, as being the nearest possible storm center. In this, Jupiter was rising in the square of Neptune. Surely there was grave danger here. In a lecture given January 6, 1936, I stated that one could expect extraordinary happenings in Spain that year, that revolution was due and that the Fascist element was stronger than one might suppose in a Republican nation. As a matter of fact, I was so distressed over this 1936 Conjunction that I went so far as to say that all Europe would be involved, and that nations which had managed to maintain their neutrality in the last war would not be able to maintain it in the coming war. Since the Mars-Saturn Conjunction was overhead in the Pacific, from this and other charts I stated that Japan was about to fight in the East.

Some people have said I was wrong in my statements. Others have said I was not so wrong, after all. The war for a while was "localized" in Spain.

When Franco arrived on the scene in Spain, I read in the newspapers that he had taken an aeroplane from the Canary Islands, where he had been more or less in exile or disgrace for some time, to Morocco, where the revolt broke out, before he stormed Spain! So the chart was right, after all. It was in the Canary Islands that some of the subversive activities against the Republic were being hatched.

The Sino-Japanese War broke out sporadically in 1936 and in real earnest in 1937.

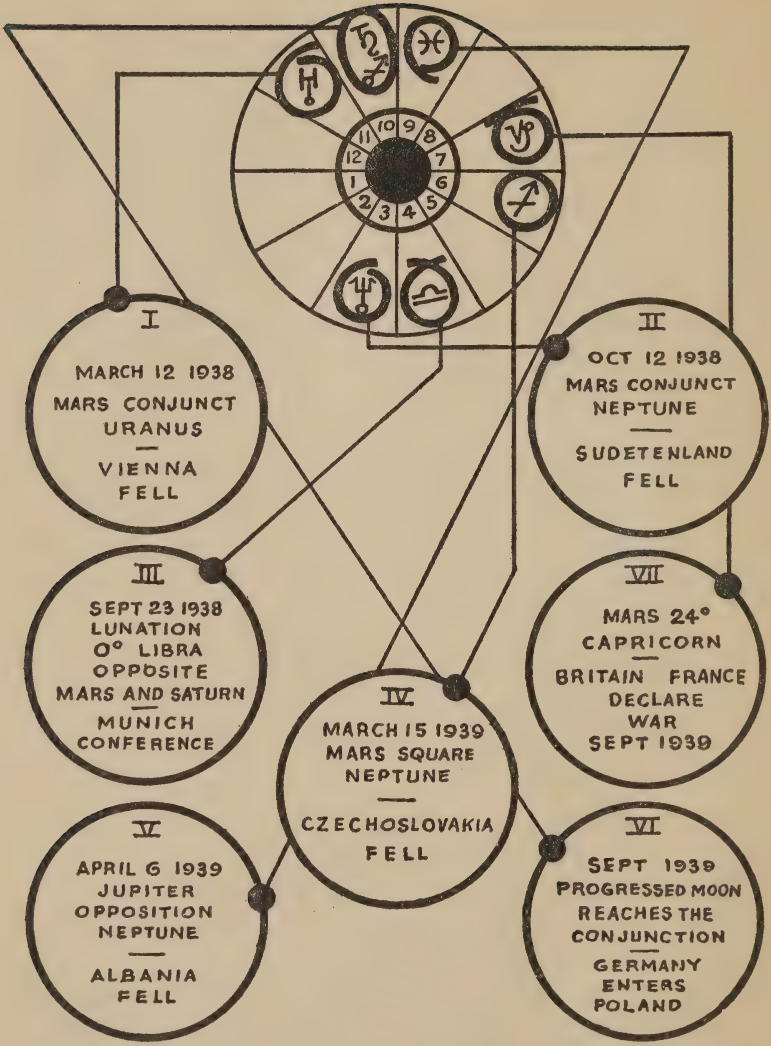
I want you to realize that the wars of these two Mars-Saturn Conjunctions, were wars in which Neptune played a part, as well as Mars. And haven't we all been involved ever since? Fighting Neptune is like fighting the dreaded Lernean hydra of old, with its nine heads. When one head is lopped off, two other heads grow in its place!

The Mars-Saturn Conjunction of February 1, 1938 stayed in force until February 11, 1940. It fell exactly over Warsaw. In astrology we allow orbs, or spheres of influence, on each side of the longitude where the conjunction is located. I have discovered in the course of research that one can allow over 10 degrees at least, on each side of the conjunction. This is on the principle that if your next-door neighbor's house rocks, your own is likely to rock too. Warsaw is 21 degrees east longitude, hence this 1938 Conjunction was due to affect Germany, Italy, Czechoslovakia, Austria, Hungary, Albania, Jugoslavia, Poland, Bulgaria, Greece, Latvia, Finland, and Roumania, Benghazi in Libya and Cape Town, all with capitals lying between 12 and 26 degrees east longitude. Here is the record of this Conjunction (see Diagram 14):

> Mars disturbing Uranus, March 12-13, Austria fell.
> Lunation opposite the Conjunction, Munich Conference.
> Mars transitting Neptune, October 12, 1938, Sudetenland fell.
> Mars opposing Saturn, November 13, 1938, religious persecution in Germany.
> Mars transitting the square of Neptune, March 15, 1939, Czechoslovakia fell.
> Jupiter transitting the opposition of Neptune, April 6, 1939, Albania fell.

Furthermore, if this 1938 Conjunction is set for Berlin, we find 24 degrees Capricorn on the Descendant. Hitler started the war on Poland when Mars was exactly 24 degrees Capricorn.

How was it possible to foresee that Norway would get into the war? As a matter of fact, this was very easy to prognosticate after looking at the February 11, 1940 Conjunction of Mars and Saturn. The ruler of the Midheaven was Neptune, fallen helpless down on the Nadir,—revealing the fall of the king and government, with possible exile, also danger from overseas and strangers lodged in the homeland. I computed this particular chart in August 1939 as soon as Raphael's Ephemeris was available. I did this because I



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I
MARCH 12 1938
MARS CONJUNCT
URANUS
VIENNA
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OCT 12 1938
MARS CONJUNCT
NEPTUNE
SUDETENLAND
FELL
III
SEPT 23 1938
LUNATION
0° LIBRA
OPPOSITE
MARS AND SATURN
MUNICH
CONFERENCE
VII
MARS 24°
CAPRICORN
BRITAIN FRANCE
DECLARE
WAR
SEPT 1939
IV
MARCH 15 1939
MARS SQUARE
NEPTUNE
CZECHOSLOVAKIA
FELL
V
APRIL 6 1939
JUPITER
OPPOSITION
NEPTUNE
ALBANIA
FELL
VI
SEPT 1939
PROGRESSED MOON
REACHES THE
CONJUNCTION
GERMANY
ENTERS
POLAND

Diagram 14. Highlights of the Mars-Saturn Conjunction of February 1, 1938.

had previously been looking at the horoscope of the King of Norway and had found it to be in such a difficult state that I wanted some outside confirmation of what I saw. The Conjunction chart confirmed my suspicion that he was due to lose his throne. Incidentally, my prediction on this helped to convert an astronomer into an astrologer!

When I say that a conjunction of Mars and Saturn is in force for two years, I mean as a motivating force. I do not mean that the effects cease after two years. A person might be due for an accident within a period of two years, but if the accident is serious he may feel the effect of that accident all the rest of his life. So it is with countries,—the danger is lurking or manifesting during two years, but to say that after the event the people are out of danger and everybody happy would be foolish.

The 1940 Mars-Saturn Conjunction of February 11 fell over 40 degrees east longitude, affecting Russia, the Caucasus, Syria, and Aden at the entrance to the Red Sea, together with the Somalilands and Madagascar. The Russian War broke out June 22, 1941 when Mars reached the opposition of Neptune, an aspect heralding the fact that the world was getting more and more involved. It is the influence of Neptune in this chart that distorts all facts and figures connected with this war; that keeps us all guessing; that has caused all the military experts to make the statements that they have made, from the inception of the Russian War; that led various people to say Leningrad and Moscow could not hold out, when the astrological assurance was that however much appearances might be against these two cities, reality was all against appearance. When the Russians look most defeated, then under this Mars-opposition-Neptune aspect, are they most dangerous. Mars (Germany), starting the war in the sign Pisces, was making a beginning in a sign of endings! A fire planet in a water sign shows their ardor will be dampened,—and opposite Neptune, eventual ruin. It shows that the Russians will use tactics unknown before. When one expects them here, they will be there. On the other hand, it is impossible to predict a clean-cut victory for either side. It is a war of exhaustion, in which neither side can gain anything materially, not even if the Germans break through the southern front in 1942, into Palestine and Syria. Until this Russian war, Hitler had started every campaign under good aspects. This was the first time that, astrologically speaking, he made a fatal mistake. Every single astrological rule for success was violated. The Moon was decreasing in light. Mercury was retrograding, and Mars was opposite Neptune. The war will involve the whole world but, started at such a time, it cannot be won by Hitler.

In the English chart set for this 1940 Mars-Saturn Conjunction, Mars and Saturn lay in the eleventh house, foreshadowing storms in Parliament and a new Prime Minister. Malefics in the eleventh house also foretold disasters, losses and deaths among friends and allies. You know the facts. Uranus there, however, revealed a new ally. Uranus rules Aquarius, the sign of Russia. It also rules Ethiopia, hence logically, both countries might become allies. When I mentioned Ethiopia back on the side of Britain no one seemed to get excited, but when I said Russia might become an ally, I was immediately accused of "wishful thinking," and told that such a thing was stupid even to dream of in all these predictions on the war. One matter must not be forgotten. In the chart set for the Declaration of War by Great Britain, the planet Uranus was in the seventh house of allies and open enemies, showing that there would be continual shifts both of allies and foes,—unexpected or drastic divorces, and unexpected new alliances and agreements.

Coming to this same Conjunction set for Washington, we find Venus rising almost exactly in Pisces,—some of the people dreaming a chimeric dream of a peace which is all illusion,—crying "Peace, peace, when there is no peace." It is opposed by the wily Neptune, increasing the Utopian nature of the dream. If this were the chart of a client, I should say, "Lady, lady, do be careful. He does not mean what he says." Fortunately, Mars and Saturn rise after Venus, showing the other side of the picture, and what another part of the nation is doing,—preparing and arming with all the force, energy and might of Mars in its most courageous

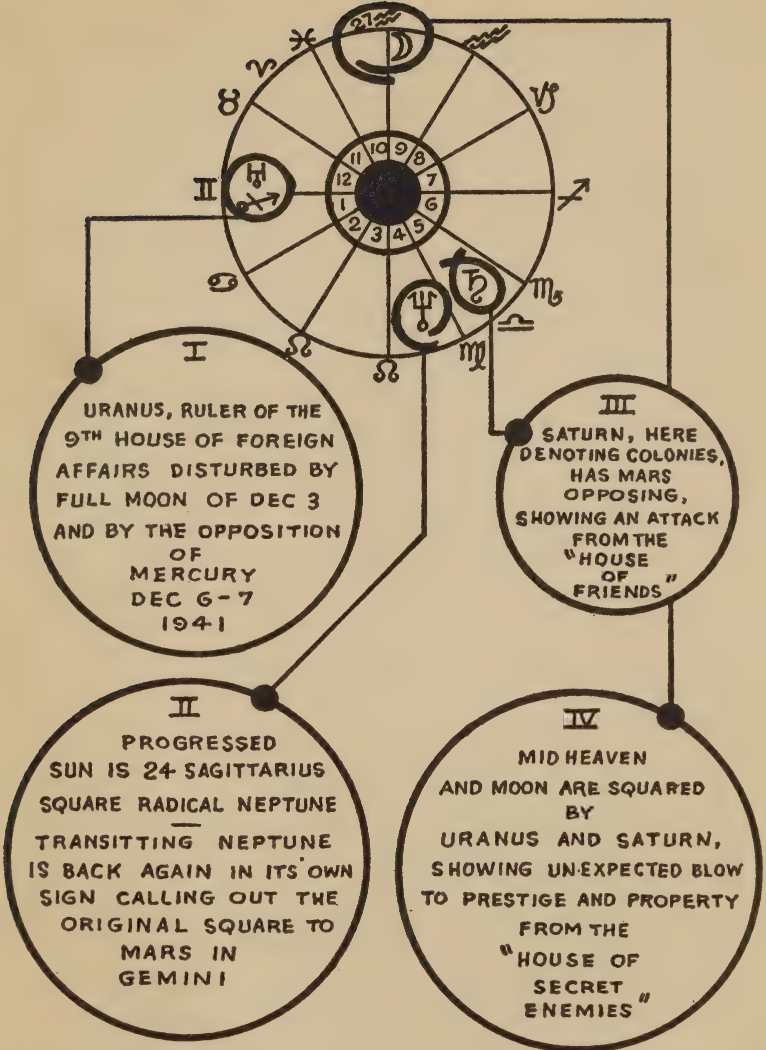
27♒
I
URANUS, RULER OF THE 9TH HOUSE OF FOREIGN AFFAIRS DISTURBED BY FULL MOON OF DEC 3 AND BY THE OPPOSITION OF MERCURY DEC 6-7 1941
II
PROGRESSED SUN IS 24 SAGITTARIUS SQUARE RADICAL NEPTUNE
TRANSITTING NEPTUNE IS BACK AGAIN IN ITS OWN SIGN CALLING OUT THE ORIGINAL SQUARE TO MARS IN GEMINI
III
SATURN, HERE DENOTING COLONIES, HAS MARS OPPOSING, SHOWING AN ATTACK FROM THE "HOUSE OF FRIENDS"
IV
MID HEAVEN AND MOON ARE SQUARED BY URANUS AND SATURN, SHOWING UN-EXPECTED BLOW TO PRESTIGE AND PROPERTY FROM THE "HOUSE OF SECRET ENEMIES"

Diagram 15. Highlights of the Chart of the United States on December 7, 1941. The war is approximately of four years duration (see page 366).

sign Aries, combined with all the power of Saturn, and with all the manifold and widespreading efforts of Jupiter in Aries; and as Jupiter rules the tenth house of the chart, we realize that this planet, representing the President, shows that he is the one who has taken account of the danger and has set defense and attack preparations in motion. The swiftness of the program is due to Aries, the fastest sign of the zodiac. As I look over this last chapter, for final corrections, it is December 7, 1941. A friend has just telephoned to tell me the dire news, so let me add this paragraph. I note in my Ephemeris that Neptune has reached the seventh cusp of this Washington Mars-Saturn chart of 1940. The treachery has come into the open. The awakening has arrived. One thing I might say of the Jupiter-Mars-Saturn planets rising in Aries, is that Aries is a sign of attack, and as we reach the period when we shall attack, then shall we do it with a will.

I looked into the horoscope of the United States.[1] This very morning, as the Japanese declared war against us, Mars opposed the Saturn of our chart. With Saturn involved, it means that the war will not be a short one, nevertheless it shows that we are the eventual victors. (See Diagram 15, p. 365.)

The war is approximately of four years' duration. There are several phases in this war:

1. A period of from sixteen to twenty months which can be compared to innumerable high-powered tug-boats, pushing and pulling a giant liner from its dock. During December 1942, peace offers may be presented, but I judge they will not be acceptable.
2. August 1943-April 1944, the liner sailing under its own steam, encountering terrific storms, but maintaining its course.
3. Victory for the allies comes in sight after January 1945.
4. There are three distinct periods when victory is due:
    a. October, 1945.
    b. January, 1946
    c. March, 1946

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[1] *See* Index.

The Allies have to defeat the enemy in three widely separated areas: the Atlantic, the Pacific and the Near East.

For years I have said the war would spread eastwards and ever eastwards until it worked around to us. Five days ago when I was asked to speak at the close of another astrologer's lecture, I maintained my conviction on this. As a matter of fact, I had expected the war between ourselves and Japan to break out in the summer of the year 1941. The United States Ingress Chart, which is set for the moment when the Sun enters Aries on March 21, revealed Mars in the fourth house, showing the destructive principle at work on American territory. War might have started any time after this date. Looking into the Japanese chart, the tenth–twelfth degrees of Aries are very apparent sore spots. With Mars transitting these degrees of Aries during the third week of July, this seemed the obvious period when war might happen. It did not do so, and since Mars retrograded and would come back to these degrees, and practically stay in them every day in November, I supposed November might start war, but again it did not. A peace conference was held November 17, with Sun opposition Saturn, which looked as though war might be delayed, but with the Sun coming to an opposition of Uranus on November 20, sudden pressure evidently was exerted. Commentators now verify this as coming from Germany, who in late November, insisted that Japan enter the war. Since the Japanese charts contain many planets in mutable signs, with Virgo and Pisces emphasized, both the month of March 1941, when we had eclipses affecting these signs, and the month of September, when we again had eclipses affecting Virgo and Pisces, calling out the deceptive principle of Neptune, were months when secret operations on a vast scale must have been in progress. In any case, I have said repeatedly that it was very doubtful if war could be delayed beyond February 1942, for reasons which I state later.

You ask, why did I predict, even in late 1939, that the war would spread eastward to Russia, to Persia and to Japan? When I mentioned Russia and Persia to one astrologer, he said I was running grave risks of making astrology look ridiculous. If one believes one's principles are right, one does not fear a judgment based upon them, rather does one fear making astrology look ridiculous by withholding what is evident. I have already explained why Russia had to be involved, but why Persia or rather Iran? We do not make all our predictions from one particular type of conjunction. We use them all,—and this will include lunations and eclipses (the latter in spite of the fact that a noted astronomer took the trouble to write a newspaper article to the effect that eclipses are not in the province of astrology). Dear astronomer, they have been in the province of astrology since the time of Sargon the Agade, and probably before. In setting up the chart of the Mars-Neptune Conjunction of September 28, 1940 for Teheran, I noted Neptune was situated near the Nadir of that capital,—and as Neptune ruled the tenth house, the Shah had no more chance of maintaining his throne than had the King of Norway. I immediately looked up the chart of the Shah and from this, too, it was most obvious that his royal days were soon to be at an end.

This same Mars-Neptune Conjunction lay over the meridian of San Francisco, denoting in the sign Virgo, labor troubles so grave along the Pacific Coast that the army (Mars) of the government (Saturn) might take control. In the light of the present war crisis, the utmost vigilance along the West Coast is necessary to forestall enemy action.

With regard to the 1942 Conjunction of Saturn and Uranus, which occurs May 3, it falls about one degree west longitude through Western France and Eastern Spain, including parts of Morocco and Algiers. It heralds terrific upheavals in these parts and through Western Europe, together with Gibraltar, the Western end of the Mediterranean and the Northwestern countries of Africa. Nothing will be stable for many years to come, for the cyclic period of a Saturn-Uranus conjunction lasts for many years. The same Conjunction lies at the Nadir of about 180 degrees (east or west), hence there are still grave problems affecting Alaska and Hawaii, and efforts being made to take them out of our possession. One should allow at least 10-degree orbs on the longitudes mentioned, in order to obtain the geographical areas covered by this Conjunction.

Then, too, in Mundane astrology the Jupiter-Saturn Conjunctions have all to be studied, as they have to do with changes in government and rulership. We have had three of them recently. The first one, August 8, 1940, lay over India, foreshadowing a twenty-year period in which far-reaching changes will be evident in the government of India. The second one, October 20, 1940, fell over 69 degrees west longitude. Note this position, for we shall come close to it later. With a 10-degree orb we include Panama (Colón is 79° 23′ West). It heralded Lend-Lease activities in the Atlantic, problems over Martinique, the revolution in Panama, the raising of the U. S. flag over Dutch Guiana. There will be many more changes to come in these areas. The last Jupiter-Saturn Conjunction took place February 15, 1941 in longitude 158° east. Using orbs on this longitude, we find that far-reaching political changes are due during the next twenty years, in Kamchatka, the mandated islands of Japan, and Australasia. Speaking of Kamchatka, at a lecture at the World's Fair in the summer of 1940, some of my audience thought I was going very far out of my way to consider such a remote place, until I explained it faced Alaska. Already news commentators are saying it is to be hoped that Russia will allow this territory to be used by us in pursuit of the war against Japan.

Finally we ask,—Where are the next danger zones?

The Mars-Saturn Conjunction of February 22, 1942 says:

(1) 68 degrees west longitude.

(2) 112 degrees east longitude.

The former takes in a line of longitudes from Halifax in Nova Scotia to Caracas in Venezuela, including the West Indies. The latter takes in the Dutch East Indies, Hong Kong, etc.

Allowing for an area of at least 10 geographical degrees on each side of the two longitudes specified, mark these areas on a map of the world. The former skirts Panama and the latter the Philippines. Keep a record of what happens in them on particular dates, between February 10, 1942 and March 7, 1944 when the next Mars-Saturn Conjunction takes place, for the record will help to establish how much orb we have to allow for these conjunctions. If you have an Ephemeris of this period, take note of when Mars conjuncts, squares or opposes any planets in the Conjunction chart, also note new moons and eclipses. If you do this you will soon realize that astrology is not a psychic gift. I say this, not because I have not the greatest respect for my psychic friends. But theirs is another gift. No astrologer has the right to give out any predictive statement and call it astrology, unless it is based upon, or deduced from, some specific configuration of the heavens. Every exponent of astrology should be able to say how and why he made his prediction. "Blind shots" may hit the mark, but they are not astrology. If a client asks for an astrological reading, astrology should be used and not some other art.

I have tried to give you the simplest series of factors that demonstrate Mundane Astrology. To understand more, it is necessary to know more of the groundwork of astrology.

Astrology is not a pseudo-science. It is an empirical science based upon the premise and belief that man and the universe are not unrelated. Astrology today is as worthy of study by the best brains in the world as it ever was in the past. I have written my book in order that you should know the ancient and honorable history of the astrologers of all ages. Their strivings and their labor are our heritage. They found the way by means of which we can unlock the door of Time. Astrologers were the first explorers of the mysteries by means of which Time holds his secrets. And while there is Time, there will always be astrologers.

Astrology is the investigation of Time, and of what Time holds, has held, and will hold until Time itself is swallowed up in eternity,

Time pressing on with starry crest
To filial sleep upon the breast
  Of dread eternity.

APPENDICES

I. *How to Erect a Horoscope*
II. *The Heliocentric System of Babylon and the Soss Periods*
III. *The Planetary Hours*
IV. *Major Translations and Editions of Ptolemy's Books*
V. *The "Sephir Yetzireh" and the Heart's Motion*
VI. *The Triads of Wales*
VII. *Horoscopes in "A Thousand and One Notable Nativities"*
VIII. *The Trivium and Quadrivium*
IX. *The Celts*
X. *Library of Dr. John Dee*
XI. *Catalogue of Authors Extant in Lilly's Period*
XII. *Precession of the Equinoxes*
XIII. *The Sun's Rays at Different Hours*
XIV. *Virgil's "Fourth Eclogue"*

APPENDIX I

How to Erect a Horoscope

Let us take the Mars-Saturn conjunction of February 22, 1942 as an example. We will set it up (approximately correct):

1. For London
2. For New York City

using the *Raphael Ephemeris* * for 1942.

On page 5 (*Raphael's Ephemeris*) we are given, in lower left-hand column under date of February 22, the Sidereal (or Star) Time, which we note down: 22 hours, 07 minutes, 02 seconds.

Then turn to page 31, which gives us the time when this aspect takes place. It is at 9:47 A.M in London. (*Raphael's Ephemeris* is calculated for noon at Greenwich. Greenwich is the suburb of London where the observatory is situated.)

In order to obtain house cusps for our horoscope, the rule is:

a. If the time is after noon, add the time of the birth or occurrence to the Sidereal Time of the day.

b. If the time is before noon, find the interval between this time and noon, and subtract it from the Sidereal Time of the day. As the time of the aspect is 9:47 A.M., the interval to noon is 2 hours, 13 minutes. This must be subtracted from the Sidereal Time of February 22, 1942.

1. February 22, 1942 Sidereal Time is . .	22 hrs.	07 mins.	02 secs.
2. Interval to be subtracted	2 hrs.	13 mins.	00 secs.
3. Result is the Sidereal Time of the Midheaven at London	19 hrs.	54 mins.	02 secs.

(NOTE: To subtract 13 mins. from 7 mins. you have to borrow one hour, or 60 mins.)

4. Turn to page 43, which is the Table of Houses for London, and find, under Sidereal Time, where result No. 3 is listed. Look on

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* *Raphael's Ephemeris* (David McKay Co.). Note, the last few pages are not numbered in this. I suggest you number them yourself, if you wish to follow these examples.

lower right-hand column. We are given two sets of figures, which come close to what we require:

a.	19 hrs.	52 mins.	00 secs.
b.	19 hrs.	56 mins.	12 secs.

In this case we use the latter figures, which will allow for a very small correction, always needed in exact work.

Next note that at the tops of the various columns on page 43, there are six columns designated:

10, 11, 12, Ascen., 2, 3

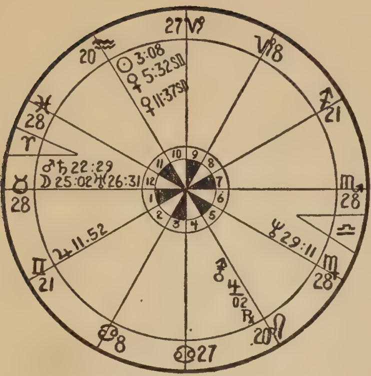
These are the cusps of six of the houses, Midheaven or 10th cusp, 11th cusp, 12th cusp, Ascendant, 2nd house cusp, 3rd house cusp.

On your wheel insert the figures parallel with your Sidereal Time of the Midheaven, taking care that you use the right zodiacal sign, which may change as you come down the columns. You then have your house cusps, as on the left side of Diagram 16.

5. The next step is to insert opposite zodiacal signs on the opposite six cusps.
6. When you have done this, turn back to page 4 and insert your planets. In ordinary work you would make corrections from the travel of the planets. Any good textbook on astrology will show you how to do this. When inserting planets use the columns in *Raphael's Ephemeris* designated "Long" that is, longitude, and, since the aspect of Mars-Saturn occurs nearer noon than midnight, use the longitude of the Moon at noon, and not the midnight longitude. Since no correction is made for the planets, do not insert the position as refined to minutes (for these minutes will be wrong at the time for which you are setting the chart). You then have Chart 16 (I have made slight corrections for you).

The next example is to set the same Mars-Saturn conjunction up for New York City on February 22, 1942.

For this chart we need to know what time it is in New York when it is 9 hours 47 minutes A.M. in London. We all know it is about 5 hours later in London than in New York, but to get the real time we have to know the longitude of New York. This is 74 degrees West. The Sun takes about 4 minutes to travel one degree of longitude, hence there are 74 × 4, or 296 minutes difference. Divide by 60 to reduce to


27 ♑
20 ♒
☉ 3:08
♀ 5:32 SD
☿ 11:37 SD
♑ 8
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☽ 25:02 ♅ 26:31
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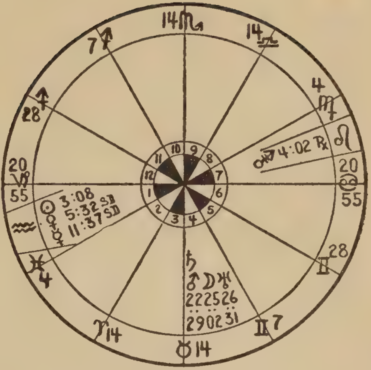
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20 ♋ 55
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28 ♊
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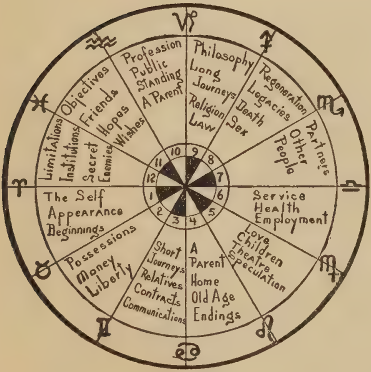
♂ ☽ ♅
22 25 26
29 02 31
♈ 14
♉ 14
♊ 7
10 9 8 7 6 5 4 3 2 1 12 11

Diagram 16: *Left.* Mars-Saturn Conjunction of Feb. 22, 1942, set for London at 9:47 a.m.

Diagram 17: *Right.* Mars-Saturn Conjunction of Feb. 22, 1942, set for Washington at 4:39 a.m.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Profession Public Standing A Parent
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Regeneration Legacies Death Sex
Partners Other People
Service Health Employment
Love Children Theatre Speculation
A Parent Home Old Age Endings
Short Journeys Relatives Contracts Communications
Possessions Money Liberty
The Self Appearance Beginnings
Limitations Institutions Secret Enemies
Objectives Friends Hopes Wishes
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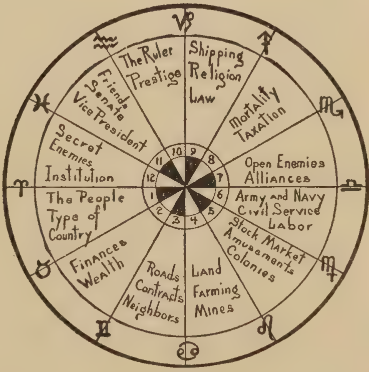
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The Ruler Prestige
Shipping Religion Law
Mortality Taxation
Open Enemies Alliances
Army and Navy Civil Service Labor
Stock Market Amusements Colonies
Land Farming Mines
Roads Contracts Neighbors
Finances Wealth
The People Type of Country
Secret Enemies Institution
Friends Senate Vice President
10 9 8 7 6 5 4 3 2 1 12 11

Diagram 18: *Left.* Diagram showing what the houses mean to persons.

Diagram 19: *Right.* Diagram showing what the houses mean in Mundane Astrology.

hours, and we have 4 hours 56 minutes. Hence, in New York the Mars-Saturn conjunction will occur this much earlier:

Time of aspect in London....	9 hrs.	47 A.M.
Less	4 hrs.	56 A.M.
Time of aspect in New York..	4 hrs.	51 A.M.

Then we proceed in the same way as in example No. 1. We find the interval to noon, which will be 7 hours 09 minutes, and this we subtract from the Sidereal Time of the day:

1. February 22, 1942 Sidereal Time...	22 hrs.	07 mins.	02 secs.
2. Subtract the interval...............	7 hrs.	09 mins.	00 secs.
3. Sidereal Time of Midheaven at New York	14 hrs.	58 mins.	02 secs.

4. Turn to page 47 (last page but one in book) and you will find the Table of Houses for New York. Result No. 3 will be found in top center column. Note here that on the 12th cusp Capricorn is listed without any degrees, hence insert 0 degrees Capricon on the 12th cusp and 0 degrees Cancer on the 6th cusp.
5. Turn back to page 4, insert planets, and you have a chart erected for New York City. The Conjunction occurs over Washington, D. C. twelve minutes earlier than over New York City, because Washington is 77 degrees west longitude. This will give you a Midheaven of 14 degrees Scorpio, instead of 17 degrees Scorpio at New York. Diagram 17 gives you the Washington house cusps as obtained from a Table of Houses for latitude 39 degrees north. Diagram 19 tells you what the houses mean in Mundane Astrology. These meanings are specific applications of the thoughts contained in Diagram 18.

You now note that, whereas the planets in all charts are the same, they are in entirely different positions in the chart. Thus the Mars-Saturn conjunction has an entirely different effect in London from what it has in New York and in Washington.*

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* In these approximate charts, it is usual to make an approximate correction for the Moon, which is the fastest moving of the planets. It is done in this way. The Moon moves about 12 degrees per day, hence in one hour it will move half a degree. The correction is always made (when using *Raphael's Ephemeris*) by adding to, or subtracting from, Greenwich Mean Time. Our interval to noon is a little over 2 hours, hence we can subtract one degree from the Moon's position, making it 25 degrees Taurus instead of 26 degrees Taurus.

In order to understand our final chapter, we have to find in what part of the world the Mars-Saturn conjunction will fall on the Midheaven, or 10th cusp. Looking at the chart for London, which is situated at the 0 degree longitude, we note Mars and Saturn lie in the 12th house, which is in the eastern part of our horoscope. In an ordinary geographical map the East is placed on our right, since mapmakers face North when taking positions, but the astrologer faces South, hence the East will be on the left. Thus the Mars-Saturn conjunction takes place East of London. The next step is to find approximately how far East. We note the midheaven is 27 degrees Capricorn, an earth sign. The next earth sign is Taurus, hence any planet at 27 degrees Taurus would be trine (or 120 degrees) from the Midheaven, but our conjunction is 22 Taurus and not 27, that is it is 5 degrees less than 120 degrees, that is, 115 degrees East longitude approximately. Because of various factors this is very approximate indeed, but it will give you an idea of how the astrologer works in trying to locate conjunctions on the earth's surface. Working by other methods our real answer is that the conjunction will be overhead at 110½ degrees East Longitude, therefore we consult an ordinary geographical map to see what capitals and countries lie on this meridian.

APPENDIX II

THE HELIOCENTRIC SYSTEM OF BABYLON AND THE SOSS PERIODS

Diagram 2 is noteworthy in that if we place the least common denominator of 120 in the center, we have an elementary concept of a heliocentric system. Multiply 120 by 3, and we see that we have 360, which is the number of the Sun. Although the ancients knew this was not the real number of days in the year, nevertheless, they called 360 days the "sacred year number," and they used this very considerably in all ancient prophecy, for it provided a more convenient number when working with a precessional cycle of 72 years to one degree. Diagram 4 shows that the makers of the zodiac knew much about planetary order. Moon, Mercury and Venus were inferior planets, and Mars, Saturn and Jupiter were superior planets. From Diagram 2 we may also derive the reason why the number 6 was so important among the Babylonians. Multiplied by 10 it gave a *soss,* or period of 60 years.

Multiplied by 10, again it gave a *ner,* or period of 600 years. Then 6 multiplied by itself is 36, an important figure, as, after 36 eclipse cycles, eclipses occur in practically the same order, that is, in a period of 649 years. The ancients here again used a more convenient period of 648 years. (See Appendix 12.) 36 multiplied by 100 is 3,600, or a period of one *ner.* 3,600 multiplied by 100 gives 360,000, or a period of one *nari.*

APPENDIX III

THE PLANETARY HOURS

The Planetary "hours" are not hours of 60 minutes in length. Our ordinary "clock" hours are found by taking one full day and dividing it into 24 parts. The planetary hours are found by taking:

1. The time from sunrise to sunset and dividing this into 12 parts; *e.g.,* in New York June 21, we have a period of 15 hrs. 7 mins. between sunrise and sunset. This is divided by 12, so that one planetary hour would be 1 hr. 15 mins. 35 secs. in duration. If Monday, start rotating the hours with the Moon. If Friday, start rotating the hours with Venus.
2. The time from sunset to sunrise, and dividing this into 12 parts; *e.g.,* June 21 we have a night of 8 hrs. 53 mins. This gives each planetary hour of the night 44 mins. 5 secs.

Planetary hours vary with latitude and the time of year. Almost every daily newspaper gives the time of sunrise and sunset.

APPENDIX IV

MAJOR TRANSLATIONS AND EDITIONS OF PTOLEMY'S BOOKS

1. *Paraphrase* of the *Tetrabiblos,* in Greek, made by Proclus (410–485).
2. Abu ben Batrik translates the *Tetbrabiblos* for Al Mamoun, and Sabal Ibn Tabir translates the *Almagest* for Ali Bey Hazen Yousseph.
3. The *Centiloquy* translated from Arabic into Latin, by John Hispalensis.
4. The *Tetbrabiblos* translated by Hiyya (before 1136).

5. Gerard of Cremona translates the *Almagest* from Arabic into Latin.
6. Anatolia translates the *Almagest* from Arabic into both Hebrew and Latin, for Frederick II.
7. A translation of the *Tetrabiblos* from Arabic into Latin, by Bonatus, in 1493.
8. An epitome translation of the *Almagest* into Latin (made from Greek texts) by Purback and Regiomontanus. These were the first printed copies. Previous ones had been written by hand.
9. First complete translation of the *Almagest* into Latin, made by Peter Lichtenstein in 1515.
10. A translation of the *Almagest* published in 1528 under the name of Trapezuntius, but actually translated and edited by Lucas Gauricus.
11. An edition of the *Tetrabiblos,* bound with Manilius and Firmicus, published in 1533.
12. John Camerarius in 1535 edited an edition of the Greek *Paraphrase* of Proclus, with a Latin translation.
13. Philip Melanchthon in 1535 published a Greek-Latin edition of Proclus' *Paraphrase.*
14. In 1537 a new edition of the *Almagest* published, containing the 7th and 8th books only, with 48 drawings by Albrecht Dürer.
15. The first Greek text of the *Almagest, Tetrabiblos* and the *Centiloquy* published by Simon Grynoeus at Basle, 1538.
16. In 1541, Trapezuntius published an edition of the *Almagest* and of the *Tetrabiblos.*
17. Gogova, at Louvain, published a Latin text of both books.
18. 1581, Junctinus brings out an edition of both books, with commentaries.
19. Edition of Proclus' *Paraphrase,* in Latin, by Leo Allatius.
20. Placidus de Titus published his *Primum Mobile.* This was not a translation of Ptolemy but a modernized textbook of astrology, based on his principles.
21. 1636, an edition published by the Elzevir Brothers at Leyden, with Greek *Paraphrase* of Proclus on one page and the Latin translation of Allatius on the other.
22. Whalley translated the *Tetrabiblos* into English.
23. Brown and Sibley revised Whalley's edition, 1781.

24. Ashmand made a new and complete translation of the *Tetrabiblos,* in 1822.
25. Many and various translations into French, German and Italian, during the 18th and 19th centuries.

APPENDIX V

THE "SEPHIR YETZIREH" AND THE HEART'S MOTION

In the *Sketch of the Talmud,* edited by Dr. Isidor Kalisch (L. H. Frank, New York, 1877), there is a note on Chapter 6, Section 2, explaining the following passage: "There are three faithful witnesses: the world, year and man, the twelve, the Equipoise, the heptade, which God regulates like the Dragon (Tali), sphere and the heart." Kalisch states that "Dr. Steinschneider . . . and Dr. Cassel maintain that the ancient Jewish astronomers signified by the word Tali, not the constellation Draco, but the line which joins together the two points in which the orbit of the Moon intercepts the ecliptic (Dragon's Head and Tail). Dr. Cassel is of the opinion that our author [of the *Sephir Yetzireh*] meant here, probably the invisible, celestial and universal axis that carries the whole Universe." In any case, it was apparently from this disputed passage that comparison grew up between the heart of the body and either the axis or the Primum Mobile (according to whether one believed that the Earth moved or that the Sun moved).

APPENDIX VI

THE TRIADS OF WALES

In the *Triads* of Wales there is much concentrated thought. Here are three of such thoughts:

There are three perfections of God:

One Infinite Life
One Infinite Knowledge
One Infinite Plenitude of Power

There are three causes of Humanity:

Divine Love
Divine Wisdom
Divine Power

There are three powers of the soul:

Affection
Understanding
Will

APPENDIX VII

Horoscopes in "A Thousand and One Notable Nativities"

A Thousand and One Notable Nativities, a small book in the Alan Leo *Astrological Manuals* (No. II), also *More Notable Nativities* and *Famous Nativities,* the latter two compiled by Maurice Wemyss, are now bound in one volume and distributed by the Aries Press of Chicago. These books are invaluable in preserving data of famous people: they also give planetary positions and house cusps. In our Index, names mentioned in the text that are included in the above three books are marked with an asterisk (*).

APPENDIX VIII

The Trivium and Quadrivium

Dante, in his *Convito* II, lists the subjects of the Trivium and Quadrivium as taught in his day. He goes further by assigning the seven planets to some specific study, giving his reasons in very considerable detail. Modern astrologers assign Uranus to the subject of astrology, but Dante and others, not knowing of Uranus, assigned Saturn to the subject, because of its "nobility and certainty."

The Trivium comprised:

1. Grammar, assigned to the Moon
2. Rhetoric, assigned to Venus
3. Logic, assigned to Mercury

The Quadrivium comprised:

4. Arithmetic, assigned to the Sun
5. Music, assigned to Mars
6. Geometry, assigned to Jupiter
7. Astrology, assigned to Saturn

These were the seven liberal arts or sciences. In his *Divine Comedy,* Dante compares them to seven portals of the Castle of Learning:

> We came unto a noble castle's foot,
> Seven times encompassèd with lofty walls,
> Defended by a fair rivulet;
> This we passed over even as firm ground;
> Through portals seven I entered with these sages,
> —*Inferno,* 4, 106–110

If the student wished to continue with his studies he could take up:

8. Natural Science or Physics
9. Metaphysics or Moral Science
10. Theology

With all ten subjects, we have the perfect ten-fold scheme of the Kabbalistic Number 10.

APPENDIX IX

The Celts

Geoffrey of Monmouth says that the Britons were descended from Trojan Æneas, and that they came from the place where Constantinople now stands. Some say they are the "Κιμμέϱιοι" of Homer, and the Kymri (Cimbri) of Germany, and that they came to Cumberland (Cymri-land). The passage of the Celts, some through North Africa and some through Western Europe, is marked by Druidical stones.

APPENDIX X

Library of Dr. John Dee

The following manuscripts are a very small portion of the library of Dr. John Dee. I have selected them because all are interesting evidence of what manuscripts were available in the Elizabethan Age. The list apparently covers all the "high lights" in astrology, from Ptolemy and the Arabic authors down to his own day.

The list is compiled from a book entitled *The Private Diary of Dr. John Dee and the Catalogue of his MSS from the Original MSS* *in the Ashmolean Museum at Oxford and the Library of Trinity College, Cambridge,* edited by J. O. Halliwell Phillipps, F.R.S. (1842), published by The Chetham Tract Society.

I have kept the original numbering of the MSS and the spelling as given by Halliwell Phillipps. Dr. Dee's library is said to have cost him three thousand pounds sterling, which was a fabulous sum of money in those days when, according to price records, one could buy a goose for two pence. It is no wonder that he died poor. This was the second library he built up. The previous one had been destroyed by thieves or vandals when he went to Europe.

MANUSCRIPTS IN DR. JOHN DEE'S LIBRARY

No.	4.	Avicenna	*De Anima Mundi*
“	5.	John Duns Scotus	*Questiones in Porphyrii*
“	13.	Ptolomaei	*Planisphaerium*
“	14.	John de Sacrobosco	*Algorithmus* and *Tractatus de Sphaera*
“	16.	Ramundi Lullii	*Liber de Quinta Essentia*
“	23.	Rogerii Bachonis	*Speculum Alchimiae*
“	24.	Avicenna	*Physiognomia*
“	28.	Alpetragii	*De Verificatione Motuum Coelestium*
“	28.	Albumazar	*Liber Florum*
“	28.	Jacobi Alkindi	*Liber de Aspectibus*
“	28.	John de Sacrobosco	*Super Tractatum de Sphaera*
“	28.	William de Aragonia	*In Ptolomaei Centiloquium*
“	28.	John de Sicilia	*In Canones Arzachelis de Tabulis Toletanis*
“	30.	Bartholomei Anglici	*Breviarum, seu de Proprietatibus Rerum*
“	33.	Rogerii Bachonis	*De Diversis Tincturis*
“	36.	Albumazar	*Introductorium*
“	36.	Zaëlis	*Electiones*
“	37.	Thebit	*De Motu Octavae Spherae*
“	37.	Jacobus Alkindus	*De Radiis*
“	37.	Jacobus Alkindus	*De Imbris et Causis de Diversitatum Aspectum*
“	37.	Thomae Bravardini	*Tractatus Proportionum*
“	38.	Aristotle	*Liber de Secretis Secretorum*
“	58.	Rogerii Bachonis	*Annotationes super Aristotelis Tractatum de Secretis Secretorum*
“	60.	Beda	*De Gestis Anglorum*

No. 62.	*Volumina duo magna, Hebreaice, de Astrologicis Judiciis* [apparently anonymous]	
“ 64.	Isaac Judaei	*Logica*
“ 65.	Alhazen	*Perspectiva*
“ 79.	Arnaldi de Villa Nova	*Liber de Alchimia*
“ 87.	Albumazar	*De Judiciis Astrologici*
“ 91.	*Tabulae Alfonsi regis Castellae*	
“ 95.	Ptolemy	*Almagesti Liber Sextus*
“ 95.	Arzachelis	*Tractatus Zaphei*
“ 96.	Rogerii Bachonis	*Tractatus de Virtutatibus et Actiones Stellarum*
“ 99.	Haly	*De Judiciis Astrorum*
“ 104.	Arzachelis	*Tabulae Astronomicae*
“ 106.	Aristotle	*Commentum in Astrologiam* [fragmentary]
“ 108.	Haly	*De Judiciis Astrorum,—Liber Novem Judicum in Astrologia*
“ 108.	Messahala	*De Nativitatibus*
“ 108.	Guido Bonatus	*De Astrologia*
“ 117.	Petrus Hispansus	*De Morte et Vita et Causis Longitudinis et Brevitatis Vitae*
“ 120.	Alfraganus	*De Annis*
“ 120.	Alcabicii	*Astrologia*
“ 137.	Petri de Sancto Andomaro et John de Lineris	*Observationes quaedam Planetarum et Fixarum*
“ 155.	Jacobus Alkindus	*De Judiciis Astrologicis*
“ 155.	Albumazar	*De Revolutionibus Annorum Mundi*
“ 155.	Albumazar	*Liber Florum*
“ 155.	Albohali	*De Nativitatibus*
“ 155.	*Mathematica Alexandri Summi Astrologi*	
“ 158.	Rogerii Bachonis	*Calendarium*
“ 159.	Beda	*De Calculatione*
“ 165.	Avendauth	*De Quinque Universalibus*
“ 165.	Alfarabius	*De Intellectu et Intellecto*
“ 178.	Gebri	*Summa Alchemiae*
“ 192.	Jacob Alkindi	*De Pluvis, Imbribus, Ventis, et de Mutationes Aeris*
“ 195.	Abraham Judaei	*Liber de Judiciis Nativitatum*
“ 200.	Ramundi Lulii	*Ars Generatis, de Medicina et Astronomia*

A Catalogue of moſt ASTROLOGICAL AUTHORS now extant, where Printed, and in what yeer.

A

Albumazar,	*Flores, quarto,* Auguſtæ 1488.
Albumazar,	*Introductorius liber in Aſtronomiam, quarto,* Auguſtæ 1489.
Albumazar,	*De magnis Cunjunctionibus, quarto,* Auguſtæ 1489.
Alfraganus,	*Compilatio Aſtronomica, quarto,* Ferrariæ 1493.
Albubater,	*De Nativitatibus, quarto,* Norrimbegæ 1540.
Alkindus,	*De Pluviis & Aeris mutatione, quarto,* Venetiis 1507. *printed ſince in folio.*
Alcabitius,	*Judiciorum Aſtrorum Iſagoge cum Commentario* Johannis Saxonii, *quarto,* Pariſis 1521.
Petrus de Abano,	*De mutatione Aeris, quarto,* Venetiis 1485.
Thomas Allen,	*Commentarium in 2. & 3. libr.* Ptolomei, *never printed.*
Cornelius Agrippa,	*De Occulta Philoſophia, octavo,* Lugduni 0000.
Conſtantinus Albinius,	*De Magia Aſtrologica, octavo,* Pariſiis 1611.
Michael Aitſingerus,	*Pentaplus Regnorum Mundi, quarto,* Antwerpiæ 1579.
Albohali,	*De Nativitatibus, quarto,* Norimbergæ 1546.
Leo Allatius,	*Paraphraſis in 4 libros* Ptolomei, *octavo,* Lugduni Batavorum 1635. *De Syderum effectionibus.*

A catalogue of Aſtrological Authors.

Alſtedius,	*Theſaurus Chronologiæ, octavo,* Herbonæ Naſſavorum 1637.
Petrus de Alliaco,	*De concordia Aſtronomiæ cum Theologia,* 4° Auguſtæ 1490.
Johannes Angelus,	*De Nativitabus, quarto,* Venetiis 1494.
Alexander de Angelis,	*Libri quinque in Aſtrologos, quarto,* Lugduni 1615.
Albertus,	*Speculum Aſtronomicum,* 24°, Lugduni, 1615
Aratus,	*Prognoſtica, octavo,* 1589.
Alkindus,	*De Iudiciis, A manuſcript, folio, tranſlated* 1272. *per* Ro. Anglicum.
Johannes Aſſuerus,	*Iatromathematica, octavo,* Roſtochi 1629
Albategnius,	*De ſcientia Stellarum, quarto,* Norimbergæ 1537. *Methodus Mathematica curandorum morborum per Anonymum,* 4°, Fronkford 1613.
Andreas Argolus,	*Primum Mobile de Directionibus, quarto,* Romæ 1610. *lately new printed. His Ephemerides, quarto, in* 3. *Tomes,* Patavii 1638. *De diebus Criticis, quarto,* Patavii 1639. *Pandoſion Sphericum, quarto,* Patavii 1644.
Abraham Avenaris,	*Principum ſapientiæ, quarto,* Venetiis 1507.
B	
Gaſper Bartholinus,	*De Stellarum natura,* 12°, Witteberga, 1609.
Redemptus Baranzanus,	*Uranoſcopia, quarto,* 1617.
Federicus Bonaventura,	*De affectionibus ventorum, quarto,* Urbini, 1593.
Thomas Bricot,	*De Cœlo & Mundo.*
Laurentius Bariona,	*Cometographia, quarto,* Londini 1578.
Thomas Boderius,	*De ratione Dierum criticorum, quarto,* Pariſiis, 1555.
Humphrey Baker,	*Introduction to judiciall Aſtrologie, octava,* London.
Tycho Brahe,	*De Diſciplinis Mathematicis,* 4°, Hamburgi 1621.

Beda,

A catalogue of Aſtrological Authors.

Beda,	*De natura rerum & temporum, folio,* Baſiliæ 1529.
Lucius Bellantius,	*De Aſtrologica veritate, folio,* Baſiliæ 1554.
Laurẽtius Bonincontrus	*De rebus Cœleſtibus, folio,* Baſiliæ 1575.
Guido Bonatus,	*De Aſtronomia tractatus* 10. *folio,* Baſiliæ 1550.
John Booker,	*Of the Conjunction of* Saturn *and* Mars, 4° London 1646. *beſides many excellent judgments in his annuall Prognoſtication.*
C	
Johannes Carion,	*De effectibus Directionum,* 16°, Frankford 1611.
Hieronomus Cardanus,	*De judiciis Geniturarum, quarto,* Norimbergæ 1547. *In Quadripartitum* Ptolomei *folio,* Baſiliæ 1578. *All other Editions are defective; in this you find at the end* Conrad Daſipodius *upon* Ptolomey.
Thomas Campanella,	*Medicinalium opus, quarto,* Lugduni 1635 *Idem, Aſtrologicorum libri 7. quarto,* Frankford 1630.
Cenſorinus,	*De die Natali, octavo,* Lugduni Batavorum 1642.
Baptiſta Codronchus,	*De annis Climactericis, octavo,* Coloniæ 1623.
Claudius Cœleſtinus,	*De influentiis Cœlorum, quarto,* Paris, 1542.
Rudolphus Camerarius,	*Centuriæ duæ Geniturarum, quarto,* Amſterodami 1633.
Cæſar Claudinus,	*De diebus criticis, octavo,* Baſiliæ 1620.
John Chambers,	*Againſt judiciall Aſtrologie,* 4°, Lond. 1601
Joachimus Curtius,	*De certitudine Matheſeos,* 4°, Hamburgi 1616.
D	
Claudius Dariot,	*Judgment of the Stars,* 4°, London 1598.
Johannes Dee,	120. *Aphoriſmi, quarto,* Londini 1558.
Helvicus Dietericus,	*Elogium Planetarum* 8°, Argentorati 1627

A Catalogue of Aſtrological Authors.

Natalis Duret,	*Novæ Ephemerides, quarto,* Pariſis 1641.
E	
Laurentius Eichſtadius,	*Ephemerides ab anno 1636. ad 1665. quarto:* Stetini *impreſſis* 1634, 1636. *ab anno* 1650. *ad* 1665. Amſterodami 1644.
Thomas Eraſtus,	*De Aſtrologia Divinatrice, quarto,* 1569.
Auguſtus Etzlerus,	*Phyſico-magico medica, octavo,* Argentinæ 1631.
Johannes Eſcuidus,	*Summa Aſtrologiæ Iudicialis, folio,* Venetiis 1489. *it's miſerably printed; he was Student of* Merton-Colledge *in* Oxford.
F	
Oger Ferrier,	*Iudgment of Nativites, quarto,* London 1642.
Augerius Ferrerius,	*De diebus decretoriis,* 24°, Lugduni 1549
Richardus Forſterus,	*Ephemerides Meteorographicæ octavo,* London 1575.
Marcus Frytschius,	*De Meteoris, octavo,* Norimbergæ, 1563. *Idem Catalogus Prodigiorum,*
Libertus Fromundus,	*De Cometa* 1618. *octavo,* Antwerpæ 1619 *Idem Meteorologicorum libri ſex, octavo,* Oxoniæ 1639.
Nicodemus Friſchlinus,	*Aſtronomicæ artis congruentia cum Doctrina Cæleſti, & naturali Phyloſophia, octavo* Frankfurt 1586,
Orontius Finæus,	*De* 12. *Cœli domiciliis, quarto,* Lutetiæ, 1553.
Firminus,	*Repertorium de mutatione aeris, folio,* Pariſis, 1540.
Marſilius Ficinus,	*De vita Cælitus, quarto,* Venetiis, 1584.
John Fage,	*Speculum ægrotorum,* 4°, London 1638.
Julius Firmicus,	*Aſtronomicon, lib.* 8. *folio,* Baſiliæ, 1551.
Robert Fludd,	*Medicina Catholica, folio,* Francofurti, 1629, *and in ſeverall other pieces of his Works, hath wrote much of Aſtrologie, he may juſtly be accounted the mirrour of our times, and of the* Welch *Nation.*
John Field,	*Ephemerides, quarto,* Londini, 1558.

Claudius

A Catalogue of Aſtrological Authors.

G

Claudius Galleaus,	*De diebus decretoriis, in ſixteen,* Lugduni 1553.
Johannes Ganivetus,	*Amicus Medicorum,* 16°, Frankfurt 1614
Petrus Gaſſendus,	*Cœleſtes obſervationes,* 8°, Paris 1630.
Rodolphus Goclenius,	*Generalis Aſtrologia,* 4°, Marpurgi, 1614
Rodolphus Goclenius,	*Uranoſcopia,* 16°, Frankfur 1608.
Rodolphus Goclenius,	*Synopſis Aſtrologiæ, octavo,* Frankfurt, 1620.
Lucas Gauricus,	*Tractatus Aſtrologiæ, quarto,* Norimbergæ 1540. *Idem de Genituris Civitatum & virorum illuſtrium,* 4°, Venetiis 1552. *De diebus Criticis,* 4°, Romæ 1546. *ſuper Tabulis Directionum* Joannis Regiomontani, 4°, Romæ 1560. *De tota Aſtrologia predictiva & aliis, in* 2. *Tom. folio,* Baſil 1575.
Bernardus Gordonius,	*Lilium Medicinæ,* 8°, Frankford, 1617
Gaphar,	*De mutatione temporis, quarto,* Venetiis 1507.
Rodolphus Goclenius,	*Acroteleution Aſtrologicum, quarto,* Marpurgi 1618.
Matthei Guarimbertus,	*De radiis Planetrum, quarto,* Norimbergæ P535.
Rodolphus Goclenius,	*Pro Aſtromantia diſcurſus, quarto,* Marpurgi 1611.
Antonius Giuffus,	*De Eclipſibus, quarto,* Neapoli 1621.
Johannes Garcæus,	*Aſtrologiæ Methodus, folio,* Baſiliæ 1586.
Paganinus Gaudentius,	*De prodigiorum ſignificatione, quarto,* Florentiæ 1638.

H

John Harvey,	*Problematiall Diſcourſe,* 4°, London 1588
Theodoricus Haghen,	*Prognoſticum ſtellare,* 4°, Ultrajecti 1553
Johannes Hasfurtus,	*De medendis morbis ex corporum cæleſtium poſitione, lib.* 3. 4°, Venetiis 1584.
Hermetis,	*Centum Aphoriſmi cum Commentationibus* Thaddæi Haggecii, 4°, Pragæ 1564
Johannes Hiſpalenſis,	*Epitome totius Aſtrologiæ,* 4°, Norimbergæ 1548.

Sex-

A catalogue of Aſtrological Authors.

Sextus Heminga,	*Aſtrologiæ refutatio*, 4°, Antwerpiæ 1583
Arthur Hopton,	*Concordancy of yeers*, 8°, London 1635.
Sir Chriſtopher Heydon	*Defence of Aſtrologie*, 4°, Cambridg 1603 *a moſt learned work, in the engliſh tongue.*
David Herlitius,	*Prognoſticon Aſtrologicum, quarto*, Stetini 1619.
George Hartgill,	*Aſtronomicall Tables, folio*, London 1594 *a moſt acurate piece, for by the Table of Houſes in his book the fixed Starres are diſcovered upon the cuſp of every houſe.*
Albohazen Haly;	*De judiciis Aſtrorum, folio*, Baſiliæ 1571. *all other* Editions *are defective.*
Robertus Hewes,	*De Globis*, 26°, Frankfort 1627.
Hyginus,	*Poeticon Aſtronomicum. Idem, opus aureum, quarto*, Pariſis 1412.
Hypocrates,	*De medicorum Aſtrologia, quarto*, Venetiis 1485.
Hermes,	*De Revolutionibus Nativitatum, folio*, Baſiliæ 1559.
I	
Franciſcus Junctinus,	*Speculum Aſtrologiæ*, 4°, Lugduni 1573.
Abraham Judeus,	*De Nativitatibus*, 4°, Coloniæ 1537.
Franciſcus Junctinus,	*Speculum Aſtrologiæ, in two Tomes, folio; he comments upon the third and fourth of* Ptolomey, *and upon* Sacro Boſco, *was printed* Lugduni 1583.
K	
Johannes Keplerus,	*Epitomes Aſtronomiæ, octavo*, Frankford 1621. *Idem* Ephemerides *novæ ab anno* 1617. *ad* 1636. *quarto*, Lincii Auſtriæ 0000.
L	
Camilli Leonarde,	*Speculum Lapidum; & ſimpathia Metallorum ad Planetas*, 8°, Pariſis 1610.
Ludovicus Lavaterius,	*De Spectris, octavo*, Genevæ 1580.
Levinus Lemnius,	*De Aſtrologia, twelves*, Frankford 1608.
Andreas Laurentius,	*De criſibus, octavo*, Lugduni 1605.

Leupoldus,

A catalogue of Aſtrological Authors.

Leupoldus,	*De Aſtrorum Scientia*, 4°, Venetiis 1520
Henricus Lindhout,	*Speculum Aſtrologiæ*, 4°, Francofurti 1608
Cyprianus Leovitius,	*De magis conjunctionibus*, 4°, Laugingæ 1564. *idem, Tabulæ Directionum*, 4°, Norimbergæ 1552. *De Eclipſibus, folio*, Auguſtæ Vindelicorum 1556. *Ephemerides, folio*, Auguſtæ Vindelicorum 1557.
Fortunius Licetus,	*De Cometis*, 4°, Venetiis, 1623.
Severinus Longomontanus,	*Aſtronomia Danica, quarto*, Amſterodami 1622.
Johannes Lalamantius,	*De diebus decretoriis*, 4°, Lugduni 1560.
William Lilly,	*Author of this Work, hath wrote Anglicus* 1644. *Anglicus* 1645. *Anglicus* 1646: 1647. *of the conjunction of* Saturne *and* Mars 1644. *of the conjunction of* Saturn *and* Jupiter 164$\frac{2}{3}$, London, 4°, 1644. *the Starry Meſſenger*, 4°, London 1645 *Worlds Cataſtrophe*, 4°, London 1646:

M

Antonius Manginus,	*Nova dirigendi Ars*, 8°, Bononiæ 1626.
Wolfgangus Murer,	*Meteorologica, quarto*, Lipſiæ 1588.
Hieronimus Mamfredus,	*De Medicis & infirmis*, 12°, 1530.
John Maplet,	*Diall of Deſtiny, octavo*, London 1582.
Marcus Manilius,	*Aſtronomicon repurgatum a* Jo. Scaligero *quarto*, Lugduno Batavæ 1600.
Gaudentius Merula,	*Memorabilia, octavo*, Lugduni 1556.
Meſſahala,	*De Revolutione annorum mundi, de Nativitatibus, &c. quarto*, Norimbergæ 1549. *idem, de Orbibus cæleſtibus*, 4°, Norimbergæ 1549.
Antonius Mizaldus,	*Ephemeridum aeris perpetuarum*, 16°, Amberga 1604. *idem, Cometographia*, 4°, Pariſiis, 1549. *idem, Planetologia*, 4° Lugduni 1551.

Antonius

A Catalogue of Aſtrological Authors.

Antonius de Montulmo,	*De judiciis Nativitatum, quarto,* Norimbergæ 1540.
Antonius Mizaldus,	*Harmonia Microcoſmi cum Macrocoſmo,* 4° Lugduni 1550. *Ephemeris* 1555. *octavo* Lutetiæ.
Johannes Michael,	*Almanack perpetuum,* 4°, Venetiis 1502.
Mercurius Morſhemius,	*De judiciis Aſtrologicis,* 8°, Baſiliæ, 1559.
Elias Mollerius,	*De Eclipſibus,* 4°, 1607.
Nicolaus Mullerius,	*Inſtitutionum Aſtronomicarum libi duo,* 8°, Groningæ 1616.
Phillip Muller,	*De Cometa,* 8°, Lipſiæ, 1619.
Paulus Minerva,	*Præſagitura temporum, folio* Neapoli 1620
Johannes Maginus,	*Tabulæ Novæ,* 4°, Bononiæ 1619. *De Directionibus, idem, De diebus criticis,* 4°, Venetiis 1607. *Ephmerides,* 4°, Francofurti 1610. *Primum Mobile, folio,* Venetiis 1604.
Montebrunus,	*Ephemerides per Tabulas* Lansbergianas *ab* 1645. *ad* 1660. 4°, Bononiæ 1645
Ludovicus Modronus,	*De Directionibus per novas Tabulas domorum,* 4°, Bononiæ 1641.
Joſephus Moletius,	*Ephemerides,* 4°, Venetiis 1564.
N	
Valentinus Naibod,	*De Cœlo & Terra, lib.* 3. 8°, Venetiis 1573. *idem, Enarratio in* Alcabitium, 4°, Coloniæ 1560.
Auguſtinus Niphus,	*De diebus Criticis,* 4o, Marpurgi 1614.
O	
David Origanus,	*Ephemerides,* 4°, Frankford 1609. *in* 3. *Tomes.*
Joſrancus Offuſius,	*De divina aſtrorum facultatate,* 4°, Pariſiis, 1570.
Hippolitus Obitius,	*Iatraſtronomicon,* 4°, Vicentiæ, 1618.
Elias Olaus,	*Diarium Aſtrologicum,* 4°, Uraniburgæ 1586.
Omar,	*De Nativitatibus, folio,* Baſiliæ 1551.
P	
Paracelſus,	*De Meteoris,* 8°, Baſiliæ. *De ſummis naturæ miſteriis,* 8°, Baſiliæ.

Jo-

A Catalogue of Aſtrological Authors.

Johannes Paduanius,	*De rebus Aſtronomiſis*,4°,Venetiis 1563.
Simeon Partlicius,	*De influentiis*, 16°, 1623.
Caſper Pucer,	*De Aſtrologia, octavo*, Witibergæ 1572.
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There may happily be many more Authors extant who have written of *Aſtrologie*, but no more have as yet come unto my hands; theſe I mention are all my own, &c. many of theſe perhaps have been ſince printed at other places: Indeed *Ptolomey* hath been printed in *folio*, in *quarto*, in *octavo*, in *ſixteens*, and hath been tranſlated ſeverall times out of *Greek* into *Latin*: that lately printed at *Leiden* I conceive to be the moſt exact, it was performed by *Allatius*, &c. In a word, ſome may blame me that I write in the *Engliſh* tongue; yet I truſt I have offended no man, ſith I write in my owne Language; and to ſuch as ſpeak as I ſpeak; nor doe I know that it is forbid unto man to write in his owne Language, or is any man bound to read or heare that contenteth him not : If this Book doe generally pleaſe, I ſhall account him good, and think him worthy to live ; but if he diſpleaſe, I then beleeve the memory of it ſhall ſoon periſh, and my ſelfe ſhall count it ill : If notwithſtanding this, mine Accuſers will not be ſatisfied with this common judgment, let them content themſelves with the judgment of the time, which at length diſcovereth the privy faults of every thing : which becauſe it is the father of truth, it gives judgment without paſſion, and accuſtometh evermore to pronounce true ſentence of the life or death of Writings. *Finis ; Deo gloria. Octob. 1. 1647.*

LILLY.

With the exception of a 13th century manuscript of Al Kindi, this Catalogue of the books owned by William Lilly, mentions books printed between 1412 and 1647. We, therefore, realize that astrological books must have been among the first off the presses of Europe. It is generally conceded by reference books that printing by movable type was introduced into Europe about 1440, and that the earliest record we have of wood-block printing in Europe is dated 1423. Yet here we have an edition of Hyginus published in Paris in 1412, and no less than eight astrological books printed before 1500. If we glance over Chapter 18 again, we shall find many others.

APPENDIX XII

PRECESSION OF THE EQUINOXES

Precession is the westward motion of the Equinoxes on the Ecliptic, as if they advanced to meet the Sun on its annual return. One effect of precession is that the signs of the zodiac do not now coincide with the constellations.

The ancient peoples seem to have used the figure 50″ per year as the rate of precession, for the following figures are found in their calculations:

It takes approximately 72 years to fall back one degree.
It takes approximately 2,160 years to fall back one sign.
It takes approximately 25,920 years to fall back 12 signs.

"Edward Barnard discovered from ancient monuments that the Egyptian priests calculated, much as we do, the movement of precession at 50 seconds and 9¾ sixtieths of a second, in a year, that is, 50 seconds and about a sixth of a second; consequently, that they knew it with as much precision as we do at this day." *

Taking 648 as an average complete eclipse cycle (see Appendix II), we note: 648 × 40 gives 25,920 years.

Also 36-year cycles, taken in "planetary order" sequence, give 36 × 7 or 252 years.

Multiply 252 by 10 and we have 2520, which is the same as Daniel's "seven times," i.e., 360 × 7.

Halve this amount and we have 1260, or Daniel's period of "time, times and a half," or one precessional sign. Taking our Jupiter-Saturn cycle of 240 years and dividing it into 25,920, we have 240 × 18, which gives 25,920.

All these division and figures are found in ancient prophecy. They are inexplicable without some knowledge of cyclic law.

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* Godfrey Higgins. *Anacalypsis,* Book 5, Ch. ii, p. 179 (1833).

APPENDIX XIII

The Sun's Rays at Different Hours

Some number of years ago Dr. John J. Pool, Principal of the International College of Chromatics of London, sent me an invitation to a lecture given before one of the learned societies of Great Britain by a retired British army officer who had lived for a number of years in South Africa. I regret that I have not been able to remember his name. I should not think that he knew anything about astrology, nor that he was aware that anything he might say could be used in support of astrology. He produced flowers and plants, which he had preserved in books and between glass, also photographs. He amazed the learned group by demonstrating several things:

1. That by screening flowers with blue gauze at various periods during the day, of from a few minutes to one hour, he had been able to change the color of plants.
2. That by screening he had also been able to change the shape of various parts of flowers.
3. That by screening for one hour in the morning, when the Sun was at a particular angle (I think he said about 42 to 45 degrees) in his garden in South Africa, he was able to kill his plants.

I have always regretted I did not take notes of this lecture, for it was the clearest and most effective demonstration I have ever known of the fact that *the Sun's rays are not the same during different parts of the day.* I mention the matter because I noted a statement by a scientist, not so long ago, that it was the height of foolishness for an astrologer to say that the Sun had any different influence upon a new-born child, or upon an adult, at one particular hour rather than at any other, for the Sun had exactly the same effect at all hours of the day.

APPENDIX XIV

Virgil's "Fourth Eclogue"

Translated by John Dryden

The last great age, foretold by sacred rhymes,
Renews its finished course: Saturnian times
Roll round again; and mighty years, begun
From their first orb, in radiant circles run.
The base degen'rate iron offspring ends.
A golden progeny from heaven descends:
O chaste Lucina, speed the mother's pains:
And haste the glorious birth: thine own Apollo reigns!
The lovely boy with his auspicious face! . . .
Thy son, shall lead the life of Gods, and be
By Gods and heroes seen, and Gods and heroes see.
Another Typhis shall new seas explore,
Another Argo land the chiefs upon the Iberian shore:
Another Helen other wars create,
And great Achilles urge the Trojan fate.
O of celestial seed! O foster-son of Jove! . . .
See, lab'ring nature calls thee to sustain
The nodding frame of heaven, and earth, and main:
See to their base restored, earth, seas, and air.

In Book 6 of the *Aeneid,* Virgil reveals that he undoubtedly believed Augustus to be the coming representative of the new age of gold:

This—this is he—the chief so long foretold
To bless the land where Saturn ruled of old,
And give the Lernean realms a second age of gold!
The promised prince, Augustus the divine,
Of Caesar's line, and Jove's imperial line.

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Names marked with an asterisk denote the fact that horoscope data can be found in *One Thousand and One Notable Nativities,* in *More Notable Nativities,* or in *Famous Nativities.*

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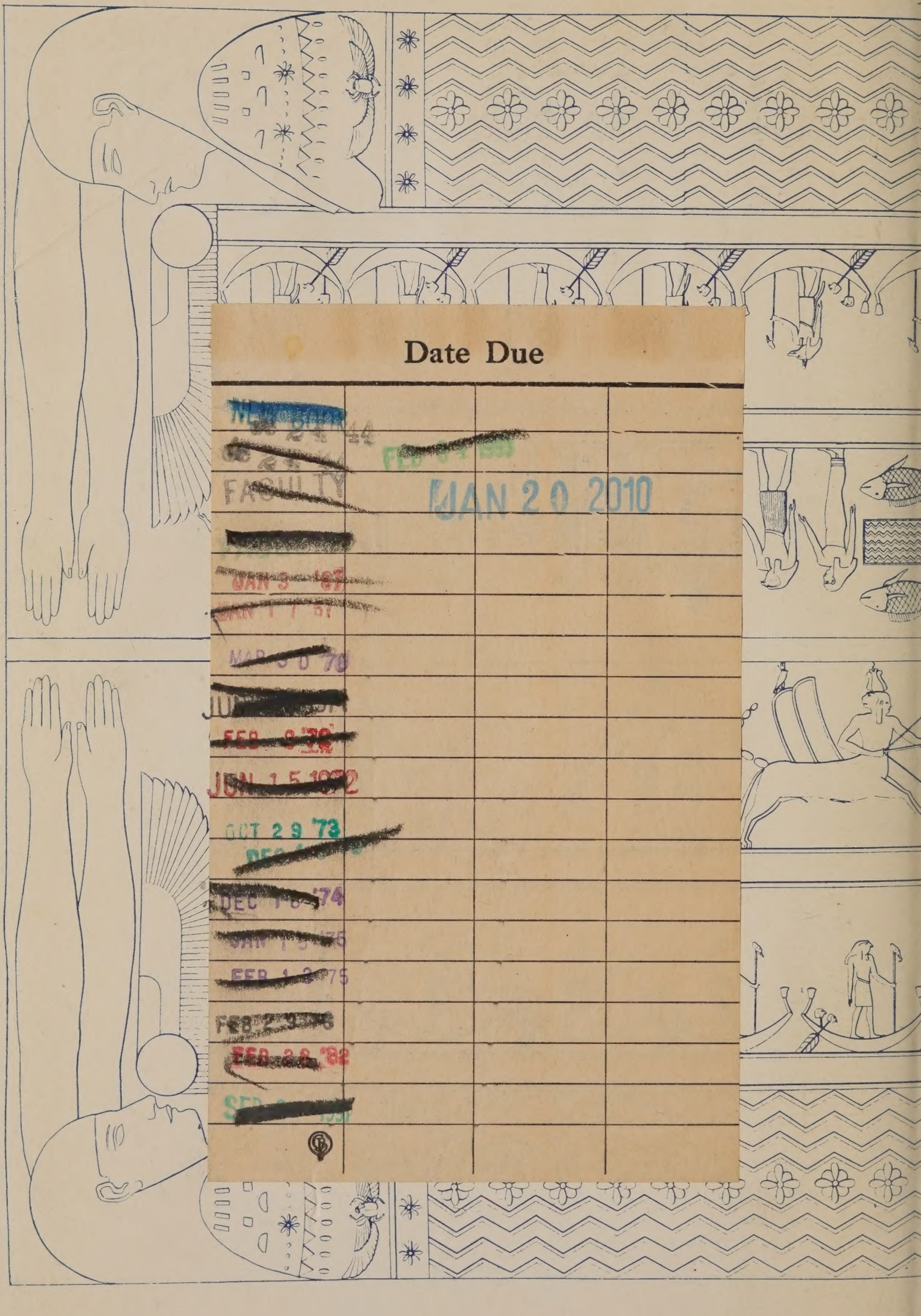

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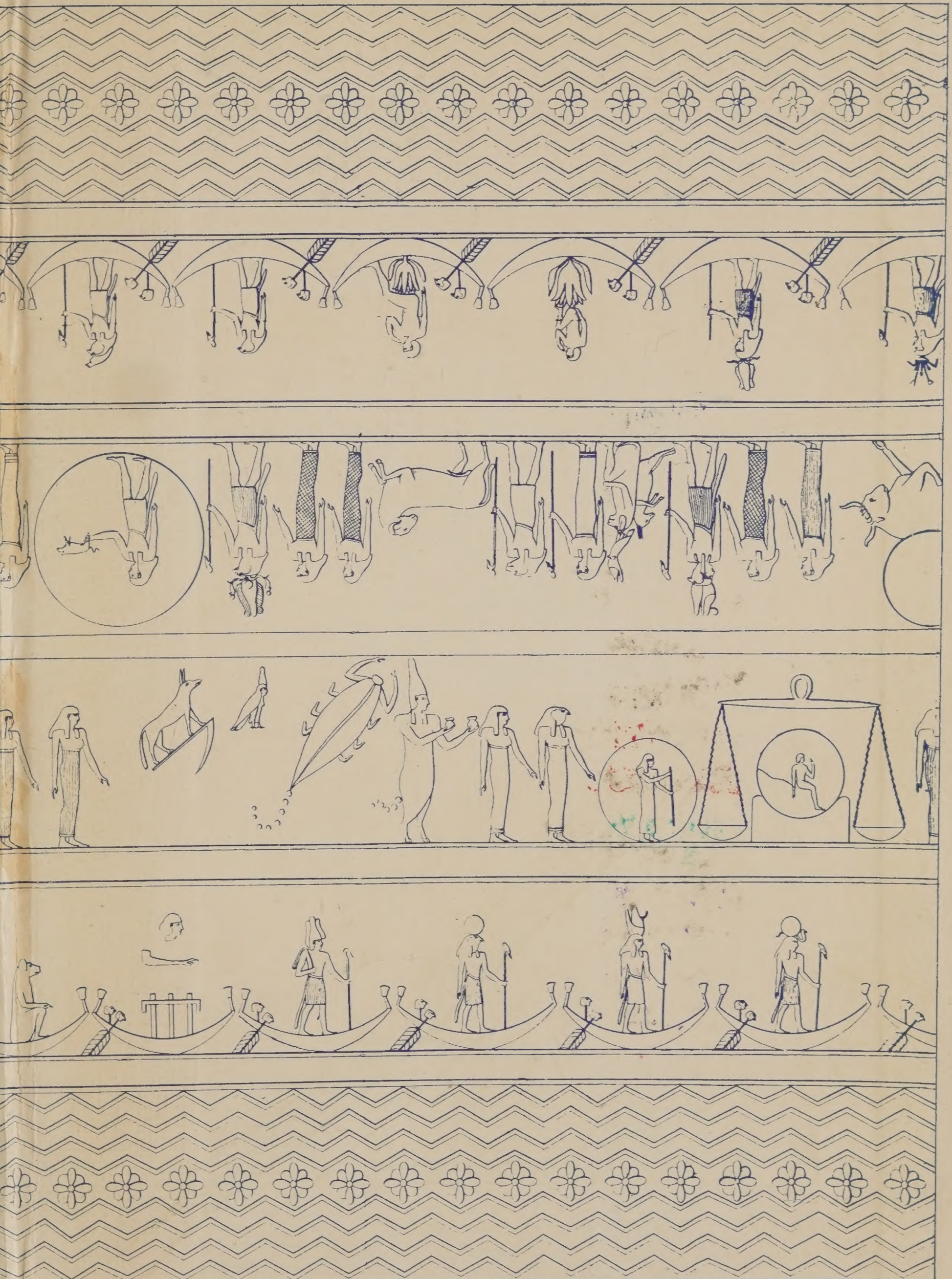

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